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This is an alphabetical index of articles and discussions arranged by leading words. It contains occasional cross references. Names of authors and men who discussed the papers, are also included. Details of society proceedings, including the names

of papers read, officers elected, etc., can be located in the proceedings under Societies. Editorials, News of the State, Marriages, Deaths, Public Health items are classified under these headings. The subjects of editorials also appear alphabetically and are marked (E).

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ACUTE GANGRENOUS OR PERFORATIVE AND SUPPURATIVE RETROCECAL APPENDICITIS.*

ORATION IN SURGERY

JABEZ N. JACKSON, A. M., M. D., F. A. C. S.
KANSAS CITY, MO.

I have chosen for my discussion before you this morning the acute perforative or gangrenous and suppurative affections of the appendix, and my remarks are confined to this generally distinctive type. To this type Deaver is said, some years ago, to have given the designation, "The bad appendix." Our early experience fully confirmed this designation through a distressingly high mortality rate. The observation, however, of certain facts in the history of these cases, with certain changes in our surgical technique, have given us such satisfactory improvement in our results that we deem them possibly worthy of consideration.

The retrocecal appendix is of particular interest for several reasons:

1. Because this anatomical position of the appendix is more common than usually appreciated, and in this position, owing to certain anatomical features, seem particularly prone to infections of the type under discussion.

2. In this position the routes of extension of infection and the ensuing pathologic sequellae are quite different from those in the more normal anatomic position.

3. With these changed pathologic extensions the symptoms are so different that to one not familiar or carefully observant the diagnosis may be overlooked or mistaken, with consequent unwarranted delay or neglect in the application of proper surgical measures; and

4. The surgical measures applied require certain modifications to meet the conditions present.

According to anatomists, the appendix is found in the retrocecal position in 20 per cent in individuals. In the general or normal type, the appendix arising from the base of the cecum passes more or less downward and toward the midline of the body. It communicates thus with the general peritoneal cavity. The designation retrocecal, on the other hand, is given to those appendices which from the base of the cecum pass upwards and backwards to the outer side of or behind the cecum and ascending colon. This type is therefore confined to the lateral peritoneal fossa, outside the colon, and extending upward toward the kidney and liver.

Anatomical Varieties: In our experience we have observed four distinct anatomical varieties of the retrocecal appendix:

1. The simplest form presents the usual mesentery and only differs from the normal in its position and course.

2. A second variety passes upward, outside the colon beneath the peritoneum of the lateral iliac or lumbar fossae. It is without mesentery and is often in fact really retroperitoneal, its anterior half alone invested by peritoneum. Curiously, however, it is usually free at its tip above and there completely invested with peritoneum.

3. The third type passes upward along the lateral wall of the cecum and colon, and its peritoneal covering is that of the colon wall. Its half lying in contact with the gut wall likewise has no peritoneal investment. In this type we can readily see how an abscess may rupture into the gut and thus spontaneously evacuate and cure itself.

4. Finally, there is a fourth variety, quite rare. In this instance the appendix passes upward directly beneath the cecum and ascending colon between the layers of the meso-colon and is thus a true retroperitoneal appendix.

Pathological Sequence: Practically speaking,

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there may be roughly called two stages in the pathologic development of acute appendicitis:

1. The stage in which the infection is confined to the appendix itself.

2. The stage in which the infection breaks through the gut wall and is extended to surrounding structures, the peritoneum generally, or in certain instances the cellular tissues, or in rarer instances into the blood stream, particularly the veins.

In the first stage, the course of the disease is the same regardless of the position of the appendix. In this stage an excision of the appendix removes the entire focus of disease with an expected quick recovery, with practically no mortality. Hence the urgency of early diagnosis and early operation.

In the second stage come changes, particularly in the ensuing peritonitis and its extensions. In the normal type of appendix the general peritoneum is more or less exposed and its diffusion is the element of chief importance.

In the retrocecal appendix the peritonitis is primarily extended to the lateral or lumbar peritoneal fossa and is usually early confined by adhesions to this space outside the colon, which rather effectually shuts it off from the general peritoneum on the inner side of the colon. Its extension is henceforth upward to the outside of the colon toward the kidney and the under and posterior aspect of the liver. In occasional instances, when the infection reaches the hepatic flexure of the colon, it may pass forward beneath the liver toward the gall bladder and an ensuing *sub-hepatic* abscess may develop. This may be mistaken for an empyema of the gall bladder, or its extension.

More commonly the extension is upward between the diaphragm and the upper surface of the liver and a resultant *sub-phrenic* abscess. From this focus the infection may perforate the diaphragm and, involving the pleura, produce either a *general* or a *localized empyema*. Or in case of adhesion of visceral and diaphragmatic pleura, the abscess may enter the lung substance and produce a *lung abscess*, or break into a larger bronchus and be coughed up. In our early experience we had one case of this type in which a large abscess broke suddenly into a bronchus, was coughed up and, choking the opposite lung, literally caused death by drowning the patient

through his draining abscess. A second case of drainage through the bronchus was thereby apparently relieved and finally recovered.

Besides these peritoneal extensions, we have also to consider the extensions through the cellular tissues. This route of extension may occur either directly from a perforation of the retroperitoneal portion of the appendix in either type two or type four, or secondly from adhesion and necrosis with perforation of posterior parietal peritoneum. We have had two of these cases in which a bulging abscess presented behind above the crest of the ileum and required simple incision and drainage with recovery. One other case was observed in which the infection penetrated the posterior muscular parieties, reaching the subcutaneous fatty tissues, with extensive cellulitis and abscess beneath the skin of the whole lumbar region and extended down over the buttocks and in the thigh, almost to the knee. This case died of septicemia, despite multiple incisions and drains.

One other case of retroperitoneal abscess we observed which was opened by a free lumbar incision. The perinephritic fat was destroyed and the kidney literally floated out of the wound. This case was operated upon in the country. Later the patient died and autopsy was secured. This revealed a further retroperitoneal extension across the spine to the opposite lumbar fossa, which presented another large abscess.

In the fourth type, the extension of infection is prone to enter the psoas muscle with more or less extension destruction. The infection in this location is intimately associated with the origin of the meso-colonic veins and a *septic thrombophlebitis* occurs. Through this route the liver is reached, with resultant *liver abscess*, generally multiple. Two such cases we have seen clinically and later observed at autopsy. In each case a gangrenous appendix of the fourth type was found. Likewise necrosis, in one case quite extensive and in the other localized, was found in the substance of the psoas muscle. In one, millions of small infarcts with early abscesses of the liver was the sequence. In the other, more advanced, two very large abscesses were found, one in each lobe. A third case of liver abscess, following this sequence, we were fortunate enough to localize, find solitary, drain and cure.

All of these varied complications were seen in

our earlier experiences. They represent largely failure in early diagnosis with consequent neglect in operation. In part, however, they followed, we now believe, inefficient surgical treatment. In the past ten years these complications have not been seen.

Symptoms and Diagnosis: In the interpretation of symptoms and in the correct diagnosis of these cases we believe that again our gross division of acute appendicitis into two distinct stages is helpful. The symptoms in the first stage are distinctive and are the same regardless of the position of the appendix and only varied by the intensity of the infection. These symptoms may be further differentiated into (1) the constitutional, or symptoms of infection in general; and (2) the special or local symptoms which point the way to the identification of the focus of infection.

1. The constitutional symptoms are mainly elevation of temperature and pulse, general depression and blood changes, in these acute cases, represented by the leucocyte count. They are chiefly important (a) in proving that we have an infection process to deal with and not, for example, a simple colic; and (b) to indicate in some measure, at least, the intensity of the infection which may inform or warn us of the probable course and termination.

2. The local symptoms call for close observations in the diagnosis of the retrocecal or other position of the appendix. The initial local symptoms of any acute appendicitis are gastric and epigastric as a rule. Rather sudden onset of rather severe pain usually referred to the stomach or at least the upper abdominal region; more or less vomiting, sometimes persistent and severe. These, with the infectious symptoms mentioned, constitute the characteristic onset of acute appendicitis and may be the only symptoms of the first stage.

The second stage, as we have noted, marks particularly the extension to the peritoneum and consequent peritonitis. With the approach of this stage there is commonly a group of symptoms indicative of peritoneal irritation or congestion which precedes actual peritoneal involvement and infection. This is marked by a more or less widespread pain in the lower half of the abdomen, with possibly some lessening of epigastric pain and gastric symptoms. With this pain and *indicative of parietal peritoneal* reaction is the ap-

pearance of *general tenderness* on pressure and *abdominal rigidity*. Thus far our pathologic processes and clinical symptoms are identical. From now on, with the onset of the true second stage, our extensions and our symptoms lead to divergence in the two types. The normal appendix, as we have indicated, communicates rather freely with the general peritoneum, including the parietal peritoneum, and in this type, owing to parietal peritonitis, the general abdominal pain, tenderness and rigidity persist until localization occurs, when they are prone to settle down as watchdogs over the *local* focus of infection underlying.

With the retrocecal appendix, the ensuing peritonitis is usually quite restricted and is quickly covered in by adhesions of cecum and colon to lateral parietal wall. The general parietal peritoneum is thus not involved, except for a brief period. The signs of abdominal pain, tenderness and rectus rigidity may and do therefore quickly disappear. And on pressure on the anterior abdominal wall over the region of the appendix we will find little or no rigidity and little or no tenderness under pressure. Even deep pressure may elicit no tenderness. The cushion of gas in a probably distended cecum prevents the pressure reaching the infected and inflamed peritoneum sheltered beneath its protection.

When the appendix communicates with the general peritoneum, we can ordinarily later find, when the peritonitis localizes, a tumor, partly the expressions of a local abscess forming, sometimes the result of infiltration and edematous thickening of all the structures involved in the localization—parietal peritoneum, intestines, omentum, etc.

These similar processes which occur about the retrocecal appendix, however, are masked largely by the overlying colon. Sometimes a suggestion of fullness can be detected on careful palpations well outside the colon and toward the back. Sometimes nothing can be felt even under anesthesia. If, however, one will make deep pressure with the finger above the crest of the ileum posteriorly and in the lumbar fossa he may elicit a very distinct, often severe, tenderness, totally unsuspected by patient before search. This *posterior tenderness* on pressure is a valuable diagnostic sign when taken in connection with a proper antecedent history.

In the absence noted or in the rapid subsidence

of the commoner symptoms, which are really those of peritonitis, the medical man is oftentimes much upset in his diagnosis. The signs of general infection (fever, leucocytosis, and pulse disturbance) will still persist, but now often only confuse the diagnosis. How often we have had a doctor bring in a case with about the following remark: "Doctor, when I first saw this patient I thought he had appendicitis. But in a couple of days all the symptoms of appendicitis were gone. His fever kept up, however, and I then thought he probably had typhoid fever. However, the course has not been just that of typhoid fever, and now I do not know just what is the matter, so I have brought him to you."

The proper diagnosis will require (1) an accurate detailed elicitation of the symptoms of the first twenty-four to forty-eight hours, which are of paramount importance; (2) an appreciation of the fact that the later signs of appendicitis are chiefly those of peritonitis, and that in the retrocecal appendix this peritonitis is confined to the limited space outside of and largely behind the cecum and colon; (3) the evidence of continued infection; and (4) the slight stiffness and the distinct tenderness on pressure above the crest of the ileum in the lumbar region.

Treatment: The treatment of retrocecal appendicitis as of appendicitis anywhere is surgical. Early diagnosis and early operation is of course indicated here as elsewhere. But we are not in this discussion considering cases reached by the surgeon at this happy stage. We are here concerned only with those which have passed on to gangrene or perforation with attendant suppuration and abscess formation. As a rule these as others are operated upon as soon as they come under observation. There is not here, however, the same acute danger as where general peritonitis is a threat. In certain types therefore we take time to load the patient up with glucose and bicarbonate of soda, by proctoclysis and hypodermoclysis to develop an alkaline reserve, wash out the stomach (by lavage), and colon (with enemata alone), to get rid of gas and lessen the dangers of post-operative intestinal paresis. We thus may convert an apparently very sick patient presenting great surgical risks into one able to meet his ordeal readily. This delay does not mean more, as a rule, than twenty-four hours.

Incision: We have found the McBurney inci-

sion to give us the best access to these appendices. Usually it will require extension by a free incision of the muscles backward to give adequate exposure, particularly if the appendix runs up high toward the liver. The straight outer rectus incision throws us too far to the inside of these appendices and exposes the general peritoneum to infection. After free incision we find ourselves in the free peritoneal cavity with no adhesions to the inner side. Before attempting to enter the abscess the general cavity is thoroughly protected by hot moist gauze packs placed over to the inner side of the colon throughout the length of the wound. Then with the index finger hugging the lateral parietal wall we bore down between it and the colon or cecum and thus reach readily the abscess. Mopping out the pus cleanly all adhesions to the lateral parietal wall are freely separated and the colon is thus mobilized from the lower end of the cecum upward as far as necessary. We are thus able to see pretty well the field of involvement. In all cases we aim to get the appendix and remove it in toto. We can usually find some normal appendicular structure either at the base or at the tip, from which known structure we begin our enucleation.

In only a few instances is there complete gangrene without recognizable structure of an appendix left. Sometimes the surrounding tissues are so infiltrated, thick and hard that recognition of the appendix is difficult. But somewhere if our exposure is adequate, we will find recognizable ground for a start. Vessels are clamped as developed. When the appendix runs along the colon wall (as in Type 3) great care is required to avoid a tear into the gut.

After freeing the remnants of the appendix we endeavor to find a healthy base for ligation, in order to obviate subsequent fistula. For similar reasons the raw area and the stump are covered as completely as possible by sutures extending into normal peritoneum on either side. The colon will tolerate considerable infolding and with experience it is rather remarkable how complete a peritoneal covering of extensive raw surfaces can be obtained.

The next step constitutes the one which in our experience has spelled the difference between high and low mortality. This is that of proper drainage. With the body in the horizontal position there is quite a basin above the crest of the

ileum in the lumbar fossa. A drain passed simply down to the base of the appendix does not reach and drain this basin. In one of our early cases, drained through the anterior wound in the usual way and drained apparently well, we found our patient still maintaining a septic course. After a morning dressing with supposedly careful cleaning under irrigation, in reaching under the loin to lift the patient for removal of a Kelly pad we, to our surprise, pressed out thus over a half pint of pus retained behind in this basin. This led us to make free lumbar stab and introduce a large rubber tube of one inch diameter for drainage of this area.

With the finger, through the anterior incision, we can locate this lowest spot above the crest of the ilium and then stab through a counter wound adequate for the tube drain. With a pair of forceps passed from behind into the cavity and out through the anterior wound, the large tube is seized and drawn through until its inner end is left just above flush with the peritoneum of the fossa. It should not project too far inside lest it press against the gut and by pressure necrosis induce a fistula. After placing drain properly it is fixed by a suture of silkworm gut. This simple expedient revolutionized our results. Many of the disasters mentioned earlier in our discussion had followed operation as then done and our mortality had been over twenty-five per cent. Since the routine introduction of this method of drainage it has been reduced to almost nothing. In looking up the results in one of our services for the last five years we find in this one series alone sixty-seven cases of this type with but one death. This death was from nephritis in a case brought in from the country and operated upon at once to accommodate the family doctor who wanted to get home on the next train. This is the only death we can recall in our five years consecutive experience. Most of our disasters were before the knowledge or use of the Fowler position. Perhaps this position alone might improve ordinary results, but we do not believe so to the extent we have secured by such drainage with the ordinary recumbent position. In is *the* point in technique therefore on which we wish to lay stress.

After installation of lumbar tubular drain, a cigarette drain is introduced at the lower end of the incision down near the apex of the cecum. When the perforation takes place at the base of

the appendix, which is at the crest of the drainage divide between the lumbar basin behind and the pelvic basin below, it is well to recognize that some of the leak may spread also into the pelvis. In this instance, after cleaning out the pus in the pelvis the cigarette drain is carried down to the floor of the pelvis. The remainder of the incision down to the drain is then sutured in layers—muscle aponeurosis and skin.

Finally it is of value to remember that during our operative manipulations the parietal wound has been exposed to considerable infection and that necrosis of fat and fascia are frequent. To lessen the extension of such infections and thus to save the integrity of our abdominal wall, we order the immediate institution of continuous hot fomentations applied directly to the wound. Moist heat increases exudation, lessens absorption and enables us to lessen and in some instances to entirely avoid extending infection and fascial necrosis. It thus shortens convalescence and lessens liability to weak walls and subsequent hernia.

TEMPERATURE VARIATIONS IN INFANCY AND EARLY CHILDHOOD*

ORATION IN MEDICINE

ISAAC A. ABT, M. D.

CHICAGO

Temperature observations in newly born and young infants have not only scientific interest but have an important clinical bearing. The proper interpretation of the wide temperature fluctuations in infants is of fundamental importance but, like other fundamental phenomena, is rarely emphasized. The peculiar levels and irregular temperature curves in young infants should be recognized. Changes in temperature in infants have not necessarily the same significance as in adults. Sudden high temperatures in newly born infants are of frequent occurrence. It is important that we have some standard limits in order to differentiate between normal fluctuations of the temperature and those indicating pathologic processes.

It would scarcely seem of sufficient importance to discuss the technique of taking the temperature. Though the older clinicians took the temperature from the groin or axilla, the rectal

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method is by far the most accurate. In Gundobin's clinic the rectal method is strictly forbidden because he considers that the danger of breaking the thermometer is great. Others object because of the ease of carrying infection and the difficulty of sterilizing the thermometer. It has been recommended to introduce the thermometer into the rectum so that the end entirely disappears, i. e., about three centimeters, holding it there for five minutes. A reading is made and the thermometer is pushed in two centimeters deeper. The difference between these two readings is more marked when the body temperature is low than when the child suffers from fever. In newly born infants it is well to introduce the thermometer into the rectum to a uniform depth of three to five centimeters. If it be introduced further the thermometer shows a proportionately higher temperature. With a good standard fever thermometer the temperature can be obtained at five centimeters in one minute. It appears that a number of factors must be considered in judging the accuracy of rectal thermometry. Some of the factors which influence the accuracy of the readings are the age of the patient, sex, condition of bodily nutrition, relaxation of the anal sphincter, and presence of feces in the rectum. When taken with an accurate, though not a self-registering, chemical thermometer, the rectal temperature obtained at seven to fourteen centimeters was found to be 0.2° - 1.3° higher than a reading made at two to six centimeters. This is not only true of patients with fever but also those without fever and in normal health. Where the bowel is filled with feces, the deep and more superficial temperatures are more nearly equal. These facts were determined in children of different ages, and it was found that the same variations occurred in the six-day-old child as in the seven-month or eighteen-month-old child. It was thought possible that if the thermometer were allowed to lie in the superficial parts of the rectum for a longer time, it might show a higher temperature, but the difference between the superficial and deep temperatures was constant no matter how long the thermometer remained in this superficial position.

The axillary temperature, of course, is lower than that of the rectum or vagina. Occasionally one observes in premature infants that the axillary temperature is higher than that of the

rectum. This applies chiefly to children kept in incubators. It is explained by the fact that the surface of the body under these conditions is warmer than the internal temperature because of the artificial heat. Wunderlich noted that in the vagina and in the feces-free rectum the readings were 0.2° - 0.7° higher than those of the axilla. These observations were at various times corroborated. One observer used a perfectly accurate bulb thermometer, and the axilla was tightly closed down upon the bulb. By allowing it to remain one or two minutes after it had reached its highest point (eight to ten minutes) he found a variation from the rectal temperature of 0.9° to 1.4° though in weaklings it was only 0.4° . The difference in these temperatures would probably be more marked in fever. It is obvious, however, that the rectal temperature is the more accurate of the two and is the method most frequently employed by clinicians of experience. Filatoff suggests a method of taking the axillary temperature which is unique. He claims for it the advantage that it is more rapid. He uses a chemical, not a self-registering, thermometer and by rubbing or closely applying the thumb and forefinger to the bulb he raises it to 104° . He quickly introduces it into the axilla. In a minute or two it has fallen and records the axillary temperature. He maintains that the reading obtained by this method is 0.2° - 0.4° less than the rectal reading.

The heat regulating mechanism of newly born infants is incompletely developed and unstable. Marked temperature variations occur even in health. The temperature curve shows greater daily variations in younger infants than in older children and adults. Transitory elevations of temperature frequently occur which seem to depend upon bodily movements, taking of food, and the external temperature. Similarly, sudden sinking of temperature may depend upon sudden chilling, cool baths or insufficient clothing. It seems certain proof that a baby is delicate and undeveloped when its temperature is low or considerably under normal. Babies who are receiving insufficient food as well as those receiving insufficient fluids show a loss in temperature. It may be noted that a baby may show a temperature immediately after nursing which is several tenths higher than the interval between feedings. On the other hand, infections may be present which produce no elevation in temperature and, indeed,



MAJOR J. WARREN VAN DERSLICE
PRESIDENT ILLINOIS STATE MEDICAL SOCIETY, 1919-'20

may be characterized by a subnormal temperature.

Naturally very little is known of the fetus in utero. Still, some facts have been developed which throw light on heat production in the fetus. Any knowledge that might be obtained about the temperature of the fetus in utero will throw light on tissue metabolism in the unborn infant. In experimental animals the temperature of the fetus falls and rises with that of the mother. In the human, increased rapidity of the fetal heart tones probably points to febrile reaction in the mother. Clinical observations have taught that the fetus will die when the maternal temperature reaches 107.6° and sometimes at 104° . It is difficult for the fetus in utero to lose heat. Consequently it is to be expected that its temperature will be higher than that of the maternal organism. It is scarcely conceivable that the fetus in utero has a well-developed heat regulating mechanism if it possesses one at all. Since it is protected from outside changes it has no demand made upon it by its environment. We would be interested to know whether the fetus itself has the power to produce heat. An opportunity presents itself in breech presentations to obtain the rectal temperature of the infant and the vaginal temperature of the mother. It is almost invariably found that the temperature of the fetus is higher than that of the mother. The new born mature infant shows a slightly higher temperature than that of the mother immediately after its expulsion. It has been found that there may be a difference of 0.3° - 0.5° between the temperature of twins. It has also been observed that well-developed infants have a slightly higher temperature than feeble infants directly after birth. These observations indicate that the fetus in utero receives heat from the mother but may be to some extent a producer of heat itself.

The mature baby's temperature immediately after birth is usually 99.7° - 100.6° . Shortly after birth the temperature falls, particularly in the first hour, and in two or three hours is 2.7° - 3.6° F. lower than at birth. This is, then, the first occasion when the heat regulating mechanism is called into play. The diminution in temperature depends upon the atmospheric conditions and the protection of the baby by clothes and blankets. The less protected the baby or the cooler the room, the lower the temperature sinks. The first

bath leads to a loss of about one degree. This loss in bodily heat is characteristic of the first few days of life. After the minimum is reached (on the first or second day) the temperature gradually rises more slowly, however, than the initial decline. After the second day the temperature begins to approach normal, but it requires eight or ten days before the heat regulating function is of the same constant kind as in older children. In more delicate babies the rise does not occur until the third day.

The daily variations of the temperature in the first ten days of life have been made the object of study by numerous observers. Forster, Sommers, Jürgensen, Wolff, and Gundobin state that the highest temperature occurs about noon and the minimum at various times during the night. On the contrary, Eross and Feiss found the maximum at night and the minimum at noon. To further confuse the situation Jundell decides that some children reach their high point early in the morning and some in the late afternoon. To sum up the observations, Muhlmann concludes that it is not possible to establish any rule for twenty-four hour variations. He emphasizes the influence of frequent food taking, crying, restlessness, motion, sleep, and the external factors such as the room temperature and the infant's clothing.

Undoubtedly the most marked variations occur in delicate and premature babies. The temperature changes are markedly exaggerated in the premature infant. The temperature is subnormal shortly after birth. It has been known to fall to 86° or lower. We have long since learned that in order to maintain the life of the premature infant it is necessary to guard against chilling and to supply external heat in the form of an incubator or a warm room. Further proof of the instability of the heat regulating mechanism is furnished by the ease of the development of hyperthermia. If the room is warm the temperature may rise to 100° or 102° or even higher. This is particularly true, however, of somewhat better developed children who are slightly older than a week. During the first days of life infants do not usually react with hyperthermia. These prematures who become infected frequently run an afebrile course. There are other factors besides the insufficient heat regulating mechanism in the skin which may explain the tendency to

low temperatures. The skin surface in prematures is relatively greater in proportion to the volume of body than in older children. The poorly developed subcutaneous fat enhances the heat liberation factor. Furthermore, prematures take only small amounts of food and so limit the heat production. Under ordinary circumstances, however, the temperature of the human body is not dependent upon the food intake. Gundobin considers that the temperature of the premature is a criterion of its development. Incidentally, it should be mentioned that Budin believes that sclerema, which is due to the coagulation of the subcutaneous fat at low temperatures, is infrequent in modern times because the temperature of the premature infant is carefully maintained.

In the newly born, infections of the umbilicus or the umbilical vessels sometimes proceed with a normal or subnormal temperature. This may occur in well-developed and mature infants as well as in the premature. Of 1,665 newly born infants which he studied, Smudzinski found 14 who fell under this classification 7 of whom died and the remainder recovered.

It has been suggested by Devilliers that a certain number of cases of fever in newly born infants are due to obstetrical traumatism. He thinks that the application of forceps, a rigid birth canal compressing the head, prolonged labor as occurs in brow, face, transverse, and breech positions, hemorrhage into the sternocleidomastoid or cephalohematoma may be sufficient to produce a febrile reaction. Indeed, the hyperthermia may be the principal symptom of the traumatism. The interpretation of these cases shows that the obstetrical traumatism has been relatively severe due to traction and prolonged period of expulsion. These cases occur most commonly in primipara. The fever is not protracted and rarely lasts longer than two days. In thirteen out of twenty-one cases it lasted one day; in five, two days. It usually reaches 100° and rarely exceeds 102° . To make these observations accurately it is necessary to make frequent readings. There are numerous lesions following the use of the forceps the most serious of which are fractures and meningeal hemorrhage. In such cases there are paralyses, focal symptoms, coma, and rigid protuberant fontanelles. The fever is prolonged and the condition is more grave than in the cases with contusions of the scalp, peri-

cranium and muscles of the neck, and hematomata. Recently it has been pointed out that autopsies on infants, particularly those extracted with forceps, show small hemorrhagic foci in the central nervous system, most frequently in the cervical cord, medulla and pons. The series referred to by Devilliers considered for the most part the mild lesions with a short, febrile course. Nevertheless, the facts are of interest and sustain the opinion that a forceps operation is a potential traumatism to the fetus. This doctrine of aseptic fever is concurred in by Mendelsohn who thinks that the fever following fractures, hematomas, and tissue contusions in children is due to the absorption of assimilable body proteins.

One of the phenomena peculiar to the first days of life is the so-called "inanition" fever of Holt and Crandall, the "thirst" fever of Eric Muller, and the "desiccation" fever suggested by Von Reuss. This is observed on the first to the fifth day, lasting a few hours with remissions rarely lasting five days. The temperature reaches 100° - 102° though if long continued it may go to 103° . Cold packs reduce the temperature though it rises following removal. The child may be quiet and drowsy, or it may be fretful and cry a good deal. The appetite is poor, and the child nurses little even when the breasts contain an abundance of milk. The loss in weight is relatively marked, and usually the time of the fever and the loss in weight coincide although the weight loss may be more marked after the temperature has subsided. The stools may have the hunger appearance. It is peculiar that well-developed strong children are usually attacked. In the preaseptic period this transitory fever was thought to be an unlocalized sepsis and was compared to that occurring in puerperal women. Eross thought that the umbilical, gastro-intestinal, and pulmonary processes were complications of the original infection. There are many facts which oppose the theory of infection. The attack always occurs on the third to the fifth day. Premature and weak children, who are predisposed to overheating, are not affected. Under identical conditions only a few children develop the fever. It is difficult to understand how an infection through the navel will disappear in a few days without reappearing. The theory has been advanced that there is a contest between the meconium and the milk flora occurring at

this time. Chossat noted that starving animals attempted to maintain their temperature. In cats and dogs before death the temperature shows a marked increase. Shortly before death this power is lost and the temperature rapidly sinks until death ensues. L. F. Meyer and Rosenstein showed there is a distinct tendency towards a sinking temperature after eight to ten days in infants who are starved. Experiments must be carefully controlled because applying external heat may elevate the otherwise low temperature. After long continued starvation the administration of diluted milk tends to produce a fall in temperature. The temperature is kept low by salt-poor malt soup while butter and skimmed milk tend to keep the temperature on a level. Eric Muller states the greater the loss in weight, the higher the temperature. He noted that fifty-five per cent. of infants who lost from 500 to 720 grams had fever. There may be a specific toxic product, which is probably the result of protein metabolism, retained by the body because of imperfect elimination. This theory would place transitory fever in the group of autointoxications where it probably belongs.

Fevers associated with digestive disorders of infancy have been variously explained. For the most part the possible bacterial origin of the fevers has been difficult to reconcile with bacteriological and pathological knowledge. Finkelstein and his students have attempted to explain this fever phenomenon in a unique way. They maintain that the salt content of whey whether administered as pure whey or milk damages the intestinal mucosa. The carbohydrates, particularly the sugars, whether milk or malt sugar, undergo abnormal fermentation, which results in the production of toxic products. The damaged intestinal wall no longer acts as a barrier between the intestinal lumen and the organs beyond which are concerned in intermediary metabolism. Consequently, the toxic products readily pass through the intestinal wall and exert their deleterious influences producing that long train of symptoms which Finkelstein calls alimentary intoxication, not the least important symptom of which is high fever. Finkelstein's theory rests upon the fact that salt injected subcutaneously or taken by mouth is capable of producing febrile reactions and that sugar in the presence of whey salts in the intestinal tract

is capable of producing fever in the manner described. Various observers have reported the occurrence of temperatures following hypodermic or intravenous injections of salt solutions. These results have been called into question, and the experiments have been repeated with sterile salt solutions without producing any temperature. Conclusions have been expressed that the temperatures following the hypodermic injection of salt solutions were not to be ascribed to the salt but to saprophytic impurities in the water used in the solution which contained bacterial proteins not destroyed in the ordinary cooking process.

The effect of external conditions have been previously alluded to. Normal and previously healthy children may suffer from heat stroke. Very high temperatures may be produced by a complete breaking down of the heat regulating center. Children who have suffered frequent insults from gastro-intestinal diseases during the summer are liable to acute exacerbations of alimentary intoxication associated with high fever and marked losses in weight. These are the patients who contribute to the marked increases of infant morbidity and mortality in the hot season. Rest and sleep also exert their influence on the temperature levels. In these conditions there is an absence of the stimuli acting on the nervous system tending to elevate the temperature. It has been noted that the temperature of an animal rudely awakened may rapidly rise.

It has frequently been shown that adults show a slight rise in temperature after exercise, the rise varying with the violence of the procedure. Jürgensen showed that individuals sawing wood for four hours exhibited a rise in temperature of two degrees. Penzoldt states that tuberculous individuals show a characteristic rise in temperature after exercise which was higher than that found in normal individuals. The correctness of his observations, however, has been doubted. Soldiers who have been subjected to a long march frequently show a rise in rectal temperature which may be 100° or higher. After they have rested for thirty minutes the temperature tends to fall to normal or nearly so. This occurs in normal individuals although accentuated in the tuberculous subject. It is likewise present in neurotics and those convalescing from acute infection and tonsillar hypertrophy. This obser-

vation also applies to older children. The fact has already been referred to that the temperature of young infants is influenced by bodily exercise, restlessness and crying. In older children this fact comes out in a more striking manner. In one girl after thirty minutes' exercise, the temperature rose to 99.9°. After a half hour more it rose to 100.4°. After she rested thirty minutes the temperature fell. Such children show a concomitant increase in pulse rate and a moderate increase in the leucocyte count. Young children who undergo athletic training not infrequently show an increase in temperature. On the other hand, those who have weak muscles tend to show some increase in temperature after long physical effort. It is not always necessary that the actual exercises be carried out, but activities such as tossing in bed or dressing violently may produce a moderate rise in temperature. One observer noticed that children who came to his dispensary with nutritional disturbances or anemias presented themselves with a temperature of 99°. After a rest it fell to a point 0.5°-0.7° lower. If they were sent out to jump or run up and down stairs the temperature would again rise 0.5°-0.7°. He observed that diseased conditions seemed to exert no influence on this rise; weak or strong, normal children or those infected with tuberculosis, the change was the same. He found that definitely neuropathic children responded more readily with an increased bodily temperature after exercise than normal children. These oscillations in temperature are so universal that they should be considered normal manifestations based upon a somewhat unstable heat regulating mechanism in young children.

From personal observations I have been able to follow many children through infancy and childhood who thrive and seem to be in perfect health and constantly show a temperature of 99°, 99.5° and even 100.5°. They have frequently been a source of great anxiety to their parents, and in the first years of my practice I confess that I participated in their fears. I finally came to the conclusion that a certain group of children show a temperature somewhat higher than normal, and after every possible pathological condition is excluded, such as tonsillitis, pyelitis, and indeed any acute or chronic infection, I advise that the thermometer should be rarely if ever used. Strange to say, not a

few of these cases occur in the families of physicians, former nurses, and in neurotic families where it was a common practice to resort to the thermometer.

THE IMPORTANCE OF THE ANAEROBIC BACTERIA TO MAN.*

W. L. HOLMAN, M. D.,

PITTSBURGH, PA.

(Continued from July issue, page 289)

The most important anaerobes met with in war wounds are—1. *B. welchii* (Welch 1892), known as *B. aerogenes capsulatus* in America and as *B. perfringens* in France. This is the anaerobe with which we are all most familiar. It is very widespread, extremely common in feces and is comparatively easy to cultivate. It is a large Gram positive frequently diplobacillus, non-motile and capsulated. It gives large colonies in and on media under a variety of anaerobic conditions. On account of its strong powers of fermentation it makes itself very evident in mixed cultures in milk, meat and similar media. Injected into the muscle of guinea pigs it is pathogenic and produces a marked breaking down of the muscle which is probably the result of the carbohydrate fermentation and possibly autolytic ferments as suggested by Dernby's studies since *B. welchii* shows in the test tube only the most minimal attack on solid proteins such as meat. It spores readily in feces, not infrequently in wounds, and with comparative difficulty in artificial media. Acid production interferes with sporulation. It is found in the vast majority of deep lacerated wounds and is the most frequent cause of gas gangrene. Its toxine has been discovered by Bull and Pritchett, Weinberg and others and an antitoxine prepared and used effectively, both experimentally and practically.

2. *Vibrio septique* (Pasteur 1872) is much more difficult to isolate. It is a rather long, moderately stout, motile bacillus with usually subterminal spores. Its colonies are very small, both surface and deep, so that it may remain in mixtures of other anaerobes and not be recognized. It is very pathogenic when injected into the muscles of animals and gives rise in man to a serious and often fatal form of gas gangrene. It is probably the second most common cause of this condition.

*Read before the Chicago Medical Society, March 12, 1919.

Although a fermenting form it is much less active than *B. welchii* and its gas production, in cultures and in tissues, where it may be the sole anaerobic infection, is much less. It is a stricter anaerobe than *B. welchii*. Toxine and antitoxine have been well studied and successfully used.

3. *B. oedematiens*, an organism discovered by Weinberg and Seguin during the war (1915) but which is closely allied, if not identical, to Novy's bacillus (1894), is a quite frequent cause of gas gangrene and is relatively difficult to isolate from mixtures. It is about the size of vibron septique, shows a marked tendency to chain formation, is motile, but this is very rapidly lost, and its spores are relatively few. It is a very strict anaerobe and is a fermenting organism with little or no proteolytic power. In animals it gives rise to much edema with very little gas and the same is true in man. The toxine is known and the antitoxine has been prepared and successfully used in human infections.

4. *B. tetani* isolated by Kitasato (1889) is the anaerobe most feared by the surgeon and rather rarely identified by the bacteriologist. It is present in some 15 per cent. of horse feces and in about 5 per cent. of a limited number of human feces especially if the individuals come in contact with horses. It is one of the fermenting anaerobes, has a very meagre proteolytic power which Rettger pointed out some years ago, is long and rather slim, actively motile and its spores are terminal and round. Stock cultures of the tetanus bacillus are rather frequently found to be mixed with other anaerobes more particularly *B. sporogenes*. Its colonies are quite small. In a concentrated study in the Lister Institute, London, on end spore bearing bacilli it was found that round end spore bearers culturally and morphologically similar to *B. tetani* but lacking in toxicity are present in the wounds. Harde found the same types in seven of sixty non-tetanic cases. The important points, that with the more general use of antiserum, the incubation period became longer; that repeated doses of antitoxin in the serious wounds and always before secondary operation were necessary; and that, as the antitoxin disappeared from the system in about a week, the symptoms of local tetanus may appear, if the organisms are still growing in the wound, should be here em-

phasized. The evidence of delayed tetanus in secondary operations weeks and months after the initial injury goes to show that the organism does not develop until its growth and toxine producing requirements are fully met. The symbiotic importance of *B. welchii*, vibron septique and others in stimulating the infection with *B. tetani* and the destructive action of *B. sporogenes* on its toxine are observations which merit further study.

5. *B. tertius* (Henry, 1917, but previously described by Rodella, von Hibler and others) belongs to a group of anaerobes frequently reported from feces and other sources and given its present name by Henry to indicate that it is the third commonest anaerobe in war wounds. It belongs to the fermentative group, is very slim, usually actively motile, forms end spores in all media which are decidedly oval but which might be confused with *B. tetani* in young cultures where immature spores are present, its colonies are small and it is believed to be quite harmless. The observation that it flourishes under conditions in media, which are favorable for *B. tetani*, is important as it is much more readily cultivated, growing well under many anaerobic conditions.

6. *B. sporogenes* (Metchnikoff, 1908) is the second commonest anaerobe found in wounds. It is a rather small, very actively motile bacillus and forms spores readily which help in its isolation, the spores being subterminal or central and usually distort the bacillus. Motility does not cease with spore formation. It is proteolytic and putrefactive. Supposedly pure cultures often contain other anaerobes such as *B. tertius*, vibron septique and others the characters of which are less distinct in cultures, and, therefore, readily overlooked. Its presence in foul smelling wounds and putrefactive cases of gas gangrene as well as its use in treatment make it an important organism in bacteriological study. It is very common, being present in all butcher's meat, as a contaminant in incompletely sterilized media and in many samples of human and animal feces.

7. *B. histolyticus* (Weinberg and Seguin, 1916) is an active proteolytic form. It is about the size of *B. sporogenes* but spores are relatively few and the motility is readily overlooked. In animals its destructive action on muscular and other tissues is truly remarkable, no other micro-organism showing such active digestion of tissue.

Its production of tyrosin* in meat medium is its most striking character in the test tube. Its general distribution has not been determined but it is fortunately rather rare in war wounds. Its use in preparing bone specimens on account of its very complete dissolution of protein matter has been suggested.

A great many more anaerobes deserve mention in this connection such as *B. aerofetidus*, *B. fallax* and numerous others but I have limited myself to these seven as bringing out the most interesting points of our present knowledge.

I wish to emphasize that the clinical classification of gas gangrene cases does not find confirmation in bacteriological study. *B. welchii* can produce the condition with gas as the predominant feature, or on the other hand, with an outstanding edema and little or no gas. It is also commonly present where there are no manifestations and mixed infections give a great variety of clinical pictures.

I have tried to show in the briefest possible manner the reasons as they appear to me from the bacteriological point of view for the success of a few of the treatments used in this war. These may be summed up by saying that the methods found to be most efficacious depend on 1. depriving the bacteria of the conditions necessary for their growth, largely a question of starvation; 2. the attempt to neutralize their harmful products, the acids by alkaline dressings, the toxins by preventing the production in unfavorable surroundings or by specific antitoxine and 3. very little if at all on antiseptic dressings. The only important exception to this is the sterilization of the edges of the wound to prevent the influx of further bacteria.

I cannot finish this brief discussion of war wound bacteriology without saying that I am convinced that hemolytic streptococci are almost, if not equally, as important in the serious infections as are the anaerobic bacteria and that they are more difficult to treat by reason of their higher invasive power. Levaditi has particularly studied the importance of streptococci of various types in wounds, especially in connection with early closure.

In conclusion I wish to say that the anaerobic bacteria are extremely common and frequently infect man. They find conditions for growth in

regions of the body which at first glance would appear to be strongly aerobic such as in and about the air passages. Microscopic areas may be sufficient to give them a foothold as we have shown. The technical difficulties have prevented their more general study and as these are overcome we may hope for a greater advance. I have not considered the infections with many anaerobic microorganisms such as the spirochaeta pallida, the actinomyces and others but have endeavored to show you that anaerobic bacteria in themselves are of great importance to man and to suggest that their greater importance may be shown in the future when we have developed better methods of study.

BIBLIOGRAPHY.

- Davies: *Lancet*, 1916, ii, 603.
 Distaso: *Lancet*, 1916, i, 74.
 Donaldson: *Lancet*, 1917, ii, 445.
 Harde: *Ambulance de l'Océan-Depage*, 1918, ii, 185.
 Henry: *Jour. of Path. and Bact.*, 1917, xxi, 844.
 Herter: *The Common Bacterial Infections of the Digestive Tract*. New York, 1907.
 Jungano and Distaso: *Les Anaerobes*. Paris, 1910.
 Kendall: *Amer. Jour. Med. Sci.*, 1918, clvi, 157 and others.
 Levaditi: *Ambulance de l'Océan-Depage*, 1918, ii, 265.
 McIntosh: *Medical Research Committee National Health Insurance. Special Report, Series No. 12*, London, 1917.
 Rettger: *Jour. Biol. Chem.*, 1906, ii, 71 and others.
 Robertson: *Jour. Path. and Bact.*, 1916, xx, 327.
 Tulloch: *British Med. Jour.*, 1918, i, 614.
 Tulloch: *Proc. Royal Soc., London. S. B.*, 1917-18, xc, 145.
 Weinberg and Seguin: *La Gangrene gazeuse*. Paris, 1918.

CYST OF THE THYROGLOSSAL DUCT; A REPORT OF TWO CASES.*

OTTO T. FREER, M. D., CHICAGO.

The middle lobe of the thyroid gland originates in early fetal life from a pocketing of the epithelium of the anterior pharyngeal wall at the place where the anterior bud or tuberculum impar, which becomes the anterior part of the tongue, is met posteriorly by the two posterior buds which form the base or root of the tongue. From this meeting point the invagination of the epithelium descends, prolonging itself as the thyroid gland moves downward to its normal site in the neck, a narrow, epithelial tube, the thyroglossal duct resulting, whose beginning on the dorsum of the tongue is permanently indicated by the foramen cecum, the little pit that is seen at the apex of the V-formed by the papillae circumvallatae. The thyroid duct is a very early fetal structure, being formed and losing its con-

*I have been informed by Dr. Kendall that the white crystals formed in such abundance in these cultures are not tyrosin. They are, however, the most striking characteristic.

*Read before the American Laryngological Association, May, 1918.

tinuity normally before the creation of the cartilage of the hyoid bone, the duct disappearing at four and one-half weeks, while the cartilage of the hyoid bone does not appear before the end of the fifth week. The lingual part of the thyroglossal duct may remain open throughout life as the lingual duct, a fine canal of varying length that begins at the foramen cecum and may even extend as far as the hyoid bone, a distance of about $2\frac{1}{2}$ centimeters. To meet the ductus lingualis the middle lobe of the thyroid gland (called the processus pyramidalis) extends upward from the thyroid isthmus, its continuation in the form of a fibrous band or tube often reaching up underneath the body of the hyoid bone to the level of the hyo-epiglottic ligament. The ductus lingualis and the processus pyramidalis represent the track of the original thyroid embryonic descent. In most individuals the thyroglossal duct vanishes in fetal life, but in thirty per cent of a number of bodies examined by Woglinski remains of the primitive duct were found in the path from the foramen cecum to the thyroid notch, these vestiges remaining unnoticed unless they take the form of separate lobes of thyroid tissue, portions of the duct as a band or tube, cysts or fistulæ. Where the upper part of the thyroglossal duct fails to disappear it always lies close to the posterior (dorsal) surface of the body of the hyoid bone and may even pass through the bone. Thyroid tissue has been found in the body of the hyoid bone.

Thus, while every vestige of the thyroglossal duct usually disappears, the thyroid gland becoming completely detached from its connection with the pharynx, traces of the fetal descent of the gland may be found along the thyroid tract anywhere from the foramen cecum to the thyroid isthmus. The highest of these traces is an accessory thyroid gland in the tongue in the region of the foramen cecum, varying from cherry size to that of a hen's egg and it has even been found that all of the thyroid tissue in the body was collected in this locality, the fetal descent of the thyroid gland never having taken place. The next remnant of the thyroglossal duct is the ductus lingualis mentioned. Still lower may be found a processus pyramidalis. In other cases there is no thyroid tissue in the track of the thyroglossal duct, a fibrous cord being found as a remnant of the duct. This may reach from the

upper border of the body of the hyoid bone, lying against its dorsal surface, to the isthmus of the thyroid gland, or a portion of the open duct may remain, ending in a fistula in the median line of the neck or beside it, or the fibrous remains of the duct may be found to descend only a short way, ending in a median cyst or the duct may expand to a cyst somewhere in its length.

Case 1. In October, 1914, the patient, a man, aged 57 years, began to have difficulty in swallowing and at the same time noticed a swelling in the region of the thyro-hyoid space. When first seen, April 19, 1915, the swelling had increased and there was an increase in the difficulty in swallowing, so that to

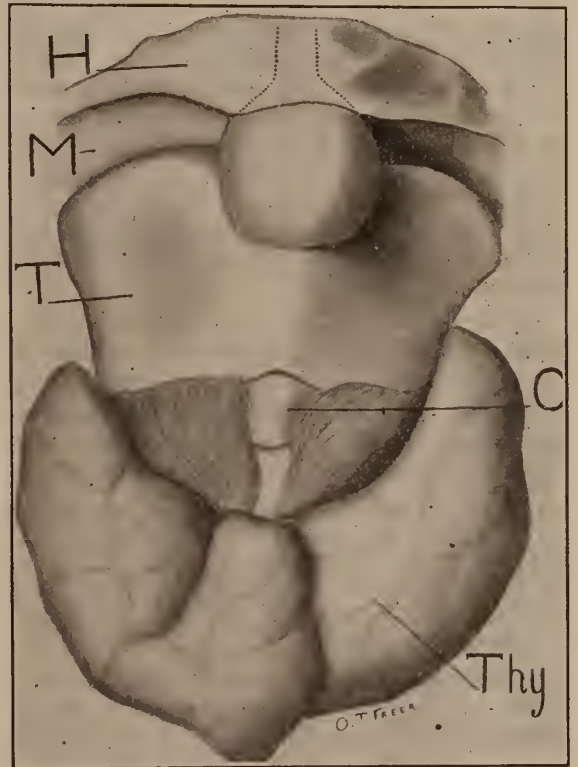


Figure 1. The cyst is seen placed in a specimen of the larynx and tongue in the position it occupied after being freed from its surroundings while still attached to the thyro-glossal duct above. The dotted line shows the position of the duct underneath the body of the hyoid bone.

H, body of the hyoid bone; M, thyro-hyoid membrane; T, thyroid cartilage; C, crico-thyroid membrane; Thy, thyroid gland.

make solid food go down he had to try twice and help with a mouthful of water.

Examination showed a normal nose, pharynx, larynx and esophagus. In the thyro-hyoid space a cyst was felt seemingly lying underneath the sterno-hyoid muscles. It was of walnut size and could be felt to interfere with the ascent of the thyroid cartilage to

the hyoid bone when the patient swallowed, that is the cyst became pinched between the two structures.

Operation on June 17, 1915. After dissecting off the superficial fascia and platysma muscle from a vertical median incision a strong, tendinous layer of fascia was exposed that was attached to the lower border of the hyoid bone above and to the border of the thyroid notch below, so firmly binding down the cyst between itself in front, the median thyro-hyoid ligament behind and the thyro-hyoid membrane laterally, the cyst being unable to escape from the compartment in which it was confined when pinched during swallowing. When exposed by removing the fascia described the wall of the semitransparent cyst (Fig. 1) was found to be so frail that it could not be seized lest it tear. This made the dissection tedious as only the tissue surrounding the cyst could be held with tissue forceps the cyst being held aside with dull retractors. The cyst was removed unhurt from its bed and was found to end above in a fibrous pedicle that lay against the posterior surface of the body of the hyoid bone and could be followed as high up as its superior border at the level of the hyo-epiglottic ligament. Removal of the cyst exposed the median thyro-hyoid ligament to view, this ligament forming the posterior wall of the compartment in which the cyst had been confined.

Microscopic section of a part of the cyst wall showed it to be composed of fibrous tissue lined with a layer of leucocytes intermingled with numerous, evenly distributed giant cells. There was no epithelium. The cyst contained a clear fluid. The removal of the cyst enabled the patient to swallow normally.

Case 2. The second patient was a woman, aged 32 years. First seen November 8, 1916. She had a swelling over the larynx since her tenth year. Iodine was injected into this swelling during the summer and since this was done the swelling had gradually increased in size.

Examination showed a spindle-shaped cystic tumor of the size of a walnut in the prelaryngeal region. The upper pole of the cyst could be felt to dive under the centre of the body to the hyoid bone; its lower pole dwindled to a cord that could be felt to reach the region of the thyroid isthmus.

Operation under cocaine on Nov. 17, 1916. It took two hours to dissect out the cyst, as only the most delicate handling could prevent its rupture and inflammatory changes caused by the iodine injection had made the cyst wall grow to its surroundings, so that the thyro-hyoid and sterno-hyoid muscles were firmly joined to it in front. The upper end of the cyst ended in a cord that extended upward under the body of the hyoid bone to its upper border where it was lost in the hyo-epiglottic ligament. Below, the cyst ended in a similar cord that joined the isthmus of the thyroid gland. When freed from its bed just before removal, the cyst ruptured, thick pus escaping, a cold abscess caused by the iodine injection.

After the cyst was taken away, the thyroid and cricoid cartillages, upon which it had lain, were bared to view.

In the first case the possibility of the cyst being one derived from a subhyoid bursa might come into question. However, the pedicle which formed a cord passing up under the body of the hyoid bone in the location of the thyro-glossal duct showed the thyroid origin of the cyst.

In the second case the entire thyro-glossal duct, expanded to a cyst in its middle, was present to prove the correctness of the diagnosis.

Related to this subject is a report by Dr. T. W. Lewis of Chicago, presented to the Chicago Medical Society some years ago, but not yet published, of obstinate cough caused by suppuration of the ductus lingualis, pus discharging from the foramen cecum. Dr. Lewis also described a large lingual thyroid gland that he showed to me and which had led to repeated severe hemorrhages.

THE UNWARRANTED SACRIFICE OF THE TONSILS, ESPECIALLY IN CHILDREN.*

H. M. HARRISON, M. D.
QUINCY, ILLINOIS.

In presenting this subject for your consideration, I do not do it with a view of antagonizing *real* progress in medicine and surgery, for I am an optimist, and quite an enthusiast concerning the achievements of our profession, but feel it incumbent to help sound the alarm against the excesses committed in the many unnecessary removals of the tonsils, especially in the young.

I am quite aware that I am not in full accord with the present time professional dictum in the presentation of this subject, but believe this to be an opportune time for its thoughtful consideration and discussion.

We must admit that fads obtain in our profession, as with other aggregations of the human family, and many have been the votaries, as evidenced by the voluminous discards, in our literature of the past. So may not the pendulum of excess, or faddism, be again swinging far beyond the rational middle ground of conservatism in the present day removal of the tonsils. May we not anticipate, that when agreed and true his-

*Read at the sixty-ninth annual meeting of the Illinois State Medical Society at Peoria, May 22, 1919.

tologic interpretations of the tonsillar bodies are had, safe and sane rules will obtain and govern those engaging in this line of work, as has been the case in other procedures, so rife in the past?

In the construction of the complex human machine, the Great Creative Genius placed within that structure all the elements and parts seemingly for some purpose and as a whole it was pronounced good. Whilst we have to do with the degeneracies of that perfect organism, we should be very circumspect in our surgical meddling, lest there follow undesirable functional entailments, some of which are being pointed out of late, even through the channel of legal prosecutions.

The histology of the tonsil, at the present time, seems almost an anomaly, for we find a great array of talent on both sides of the question as to just how and through what channels the infections travel. The earlier writers believed that the ducts of the mucous glands opened into the tonsillar crypts, and some of the text-books reiterate that today, but others, like Labbe, Serugne, Von Levinstein, Frankel and Maclachlan, have shown that they open at the periphery of the tonsil. Wright says that with our present knowledge it is not accurate or proper to attempt a discussion of the physiology or function of the tonsil. He enshrouds the process of infection with the obscuring theory that it is of a physico-chemical nature, which does not clarify the subject as to how, where or through what channels the bacteria enter and travel, in their infectious course, leaving only the inference that the tonsils are subject to infections the same as all other organized bodies having the ordinary chains of lymphatics and subject to the same local and constitutional influences.

Stöhr, and others, have defined a peculiar arrangement of the epithelial lining of the tonsillar crypts whereby dehiscences occur, which are believed to permit the entrance of micro-organisms, which is only another way of explaining the solution of continuity so favorable to infection.

A multitude of authorities might be cited, pro and con, but they do not help us to get anywhere in the solution of this intricate problem. As a matter of fact all mucous membranes are especially susceptible to infection from the myriads of bacteria that find lodgment on their surfaces, if the conditions are favorable. So why pick out

the tonsil as the chief offender and extirpate it, normal or abnormal, right or wrong, and perpetuate the *habit*, which Fetterolf says represents practice *only*, not principle.

The faucial tonsils that are left still have an entity and we wish to describe them grossly as being deeply located between the anterior and posterior pillars of the fauces. They are composed largely of lymphoid tissue, said to be closed lymphatics, having no large afferent or efferent lymphatic sinuses, as have lymph nodes. The faucial surfaces are covered with a mucous membrane that lines even the crypts and dips well down in the sulci of their lobulated structure. They possess the same lymphatics as any other organ, and are encased within a dense fibrous capsule. The position and environments the faucial tonsils occupy, enter into their being so frequently involved in inflammatory attacks and offer a mechanical difficulty in their safe removal; being located in a muscular trigon or fossa, composed of the palato-glossus anteriorly, palatopharyngeus posteriorly and the superior constrictor muscle externally, or at their base, rendering it difficult to separate them from this muscular environment without injury.

Then in a large percentage of throats we find the remains of an embryologic membrane in evidence over and about the tonsil and pillars. This membrane, called the *plica-triangularis*, is attached at its base to the side of the tongue and extends over a part or all of the tonsil to be attached to the *anterior* pillar and some times to the posterior pillar. This whole, or partial, encompassing of the tonsil presents a perfect picture of faulty drainage that most surgeons would certainly correct were their attention called to it.

We believe that this faulty drainage is the most important thing we have to reckon with in abnormal tonsils. The normal action of this muscular trigon around the tonsil in each effort at swallowing, is to seize it and squeeze or express out the contents of the crypts, mucous follicles and peritonsillar spaces, a massaging in other words, that tends to clear it of all offending detritus, etc., and the massaging helps in its retrogression after childhood.

Take the tonsil and muscles crippled by this *plica* and we have the anterior pillar sweeping over the tonsil by reason of the attachments of this membrane to the pillar and side of the

tongue in the backward sweep of the tongue in each act of deglutition.

Then we nearly always find in such throats the diverticuli or pockets between the anterior pillar and the tonsil, some times posteriorly, as well as enlarged crypts that are *real* culture tubes for the ever-present flora of bacteria and are receptacles for lodgment of foods and the detritus of the throat. This is all a peritonsillar condition and if we accept the trend in the *conclusions* of the many investigators that the most logical channel of infection is through the mucous follicles, ducts and the peritonsillar chain of lymphatics, we may largely exclude tonsillar culpability and say it is peri, rather than intra-tonsillar.

The teachings of Jacobi even years ago, when he said that in membranous throat disease, whenever the membrane is limited to the tonsil there is little, if any, glandular swelling in the neighborhood. Whilst if the membrane extends from the tonsil, or *starts* at a distance from the tonsil, the neighboring lymph nodes swell at once. His clinical observations have stood the test of time and must still be reckoned with in the direct absorption by the tonsil.

Then Rosenow lately found the abscesses following poliomyelitis infections to be extratonsillar, which also points to the peritonsillar route.

Dr. Lilly, of the Mayo Clinic, said in a recent number of the JOURNAL that where there were diseased teeth and tonsils, the teeth should be removed first, and when done the tonsils would become normal in most cases.

Demonstrations in the injection of soot into the gums and nose and the new oxygen treatment for pyorrhea are demonstrating the courses of infection and we may soon have to vie with the dentist in the removal of the foci of infection. From the current medical literature the removal of a healthy tonsil is becoming a mooted or debatable question.

In the normal tonsil we do not find the plica triangularis in evidence, and *thereby* are led to believe by this exemplary conditioned organ that in the removal of that membrane we have both a prophylactic measure and cure for most tonsillar troubles, especially in children, singers and speakers.

The association and range of the physiological life of the tonsil, according to Wright, is depend-

ent upon the active metabolism of childhood, and he points out also a functional relationship between the teeth and tonsils. That when *dentition* is *completely accomplished*, both the *cervical glands* and *tonsils* *recede* without treatment or operation. Like the physiological life of many tissues of the organism, the tonsils are not co-extensive with the life of the individual. Serving their functional purpose from infancy to puberty, when other lymphoid structures take on their periodical activity, they should *then* take on their decline, so that the function of the tonsils cannot be said to be ended before puberty is well established.

The mechanical function of the tonsil in the way of a support to the surrounding muscles never ends and is essential to a good throat. Therefore to ruthlessly remove these important organs of childhood, where they are normal, or can be made so, savors too much of commercialism, and cannot be too strongly condemned.

Dr. Kenyon, of Chicago, has made a searching investigation as to the foundation of voice impairments resulting from removal of the tonsils. Asking your indulgence, I will make a condensed quotation from his report.

STUDY OF TONSILLECTOMIZED THROATS

The following report on tonsillectomized throats is based on the systematic study of 161 tonsillectomized patients. The patients were of all ages, operated on by the various well known instrumental and technical methods, and by about twenty operators. The surgeons were mostly thoroughly experienced and some were unusually skillful; a small but unknown proportion were interns.

1. Neither palatoglossus nor palatopharyngeus muscles show more than very slight retraction, namely, the faucial region on both sides, including pillars and palate, were left essentially normal; six patients, 4 per cent.

2. Both palatoglossi slightly to moderately retracted, both palatopharyngei only slightly retracted, or normal; two patients, 1 per cent.

These two groups, representing essentially one in every twenty of the patients, include all that showed the clean, free, practically normally appearing and acting fauces, such as operators theoretically attempt to secure. All others were cases presenting very evident, though by no means necessarily serious, deformity.

3. Palatoglossi moderate to marked retraction, functioning in some cases slightly, and in some cases not at all; 150 tonsils, 47 per cent.

4. Palatoglossi completely obliterated, having dis-

appeared into the lateral wall; 122 tonsils, 39 per cent.

5. Palatopharyngeus not perceptibly impaired; 149 tonsils, 49 per cent.

6. Slight to moderate adhesion of palatopharyngeus to lateral wall, and moderate impairment of muscle; 106 tonsils, 45 per cent.

7. Marked to complete adhesion of the palatopharyngeus to the outer wall; decided and in some cases total incapacitation of muscle (with inevitable resulting tension and shortening of palate); 47 tonsils, 15 per cent.

As to the palatoglossus, then, in more than 50 per cent of the cases the muscle had ceased completely to functionate, let me repeat, and in 14 per cent the muscle seemed quite free from impairment. The palatopharyngeus was almost or completely incapacitated in 15 per cent, and practically not at all impaired in 49 per cent. The amount of tension, retraction, and destruction to the palate was very important, and will be brought out in other connections.

Summary and Conclusions

1. In view of the foregoing facts, any sound, conservative conclusion must show that, unless through the exercise of better technic or of greater skill the deformities from tonsillectomy can be diminished, tonsillectomy is in a situation which if not alarming is at any rate serious. If one case of important functional impairment, for example, of the speaking voice, were known to occur inevitably in each hundred or 200 or even 300 cases of tonsillectomy, our attitude toward the operation would become much more attentive and careful than it is today.

2. In removing the tonsillar capsule we take out an important supportive structure on which the normality of the physiologic action of the soft palate largely depends. Cases in which operation has been performed, as they exist, show a frightful amount and degree of postoperative deformity, dependent in large part on the very principle of the operation.

3. Uncertainty as to operative complication leading to increased deformity is inevitable.

4. Danger to the speaking voice necessarily lurks in the very nature of the operative conditions, and impairment to the speaking voice is inevitable in an as yet unknown percentage of cases.

5. The danger to the singing voice from stiffness and adhesions begins, theoretically, long before that to the speaking voice.

6. The present situation calls for further intelligent efforts applied to technic and delicacy of procedure, and possibly to greater care in lessening postoperative scar tissue, in the hope that the adhesions and tensions may be decreased. In the meantime the dangers to the possibilities of the artistic voice in children must apparently continue. But, until the situation is further cleared up, for the surgeon to go on performing indiscriminately tonsillectomies on the throats of adults with singing voices of great beauty or of great importance to their possessors is for him

to take risks which the artist himself would not consent to take did he know clearly the situation.

7. The weakness of the present professional attitude in favor of the exclusive employment of the extra-capsular operation lies in the fact that no evidence exists which proves that an operation aiming at a clean complete intercapsular lymphectomy, namely, complete removal of lymphatic tissue within the capsule, might not prove to be practically as capable of eliminating infective dangers as the present extra-capsular operation. And such an operation would not only be free from serious deformity, but would be altogether a less serious operative procedure. The opinion of French that 80 per cent of tonsils could as well be operated on without extreme radicalism is probably true, and could probably be verified.

8. In view, then, of the whole situation, and granting for the moment the correctness of the facts herein presented, must not the profession in justice to its scientific aims and mission turn toward the matter of developing a thorough though relatively conservative operation, which preserves undisturbed the tonsillar capsule? If such an experimental attempt should meet with success, as it probably would, the operator would have at his disposal both a conservative and a radical operative procedure, between which in the individual case he could make a rational choice. Such an operation could practically always be employed in singers.

I have seen quite a good many cases that confirm the report made by Dr. Kenyon, which leads me to believe that the *real* method for removing the faucial tonsil has not yet been fully established.

I also believe the intra-capsular method thoroughly practical, especially in children and some young adults, where we have follicular hypertrophy, and it is not fraught with the dangers of crippling the surrounding muscular arrangement.

I would not decry the removal of *really* disorganized tonsils, which, from their size, or otherwise, are menacing the health and welfare of the patient. Probably the time will never come when the operation for complete removal of the tonsil will not occasionally be performed. However, like Dr. Murphy of Iowa, who has contributed so much to our literature on this subject, I feel that more than ninety per cent of the tonsillectomies performed today should be abandoned for a more scientific, practical and safe method.

If the "ounce of prevention be worth more than the pound of cure," try the drainage treatment, which we know to be so efficient that failures are almost negligible.

(The *plica triangularis* and drainage operation illustrated by charts.)

DISCUSSION

DR. A. M. CORWIN (Chicago): We may not waste time in discussing this paper, except to express our surprise that this very good fellow practitioner should lend himself to the folly of going back to the scrap heap of the past, to collect a lot of discarded notions to put before this scientific body.—Is it possible that he has gone to sleep, say twenty-five years ago, like Rip Van Winkle, but that, unlike Rip, he has not waked up?—If the doctor had paraded an antivivisection essay or a creed on "Why I am against vaccination," the matter would not have been more out of place. The word "unwarranted" in the title applies to the paper itself, not to tonsillectomy well done, which the doctor would like to banish.

If there is one theory established upon rock bottom of proven fact, it is our modern conception of focal infection, which has revolutionized the practice of medicine, sweeping away the empiricism with which many of us graduated twenty-five years ago. Furthermore, among the dozens of recognized foci ²¹ which pathogenic bacteria are known to enter and produce their selective deviltry,—deviltry which we have been pleased to label rheumatism, or *itis* this or *itis* that, the tonsil takes satanic place next to the teeth.

But the term "unwarranted slaughter," misused by the doctor, might very well be used to express the careless sacrifice of these agencies of health, youth, comfort and good looks, the teeth. Too many of them are being pulled, innocent ones, with scant courtesy. On the other hand, to remove tonsils even upon suspicion will do no harm, providing always that such removal be properly done. To leave a morbid tonsil or part of one in place to multiply trouble is a calamity. We would personally rather sacrifice a hundred so-called innocent tonsils, than overlook one source of endocarditis, nephritis, arthritis, gastric ulcer, and all the rest. Healthy tonsils are rare birds. Better preserve even these in bottles as curious specimens. This is a good use for alcohol.

The tonsil has for a very long time unwarrantably slaughtered hosts of people, and you all know it. In recent times, we got our heads together, we general practitioners, we urologists, we obstetricians and we pediatricists, and this is the one ground upon which all members of the profession stand together. To execute a good tonsillectomy for cause, local, regional or general, is one of the operations which is not thought unethical for a dermatologist or psychiatrist to do if he so elect. Any and all of the profession should be in a position, if they choose, to take out tonsils. But they should learn now.

Now the Doctor's talk here, referred to many accidents and malformations, possible disturbances of voice and what not after tonsil removal. This is a

slaughter of the environment, not the slaughter of the tonsil. If these glands are taken out properly, there is no slaughter of the environment, the pillars are all right, they are free to act, the supports are all there. So far as hypothetical functions of the tonsil are concerned,—as to their having crypts as culture tubes for the manufacture of autovaccine solutions to overcome infection, and what not,—we know all about those fifty-seven varieties of fanciful tonsil function.

The whole thing is here, the tonsils are in everybody as early blood makers, and ninety per cent of them become diseased. There are very few tonsils that hadn't better be removed. And to remove them well does no harm. Not to remove them leaves wide-open doors to trouble, preventable trouble.

We laryngologists have removed a very large number. We have set the pace very promptly and evolved the method. The general practitioner has removed a great many. So has the surgeon. Some of these millions have not needed removal, but I am here to say that when they were taken out without serious damage to the environment, the pillars, and palate, no harm was done. I, personally, have yet to see in thousands of cases, literally, I have yet to see a permanent serious complaint, let alone a serious effect from an efficient removal of tonsils; and we perfectly know that if this operation had been done ages ago, by the general surgeon, when he dissected long series of glands from the deeper cervical tissues and left the tonsil in to multiply lesions—if he had gone at the tonsil first, many of these cases of lymph gland dissection would not have been necessary, and the patient cured instead of sacrificed to tonsil infection.

Now I take the broad view that while the laryngologist trains himself notably to do this work, and has developed the technique, still he is quite willing that all medical practitioners, internists and all others who wish to do their own work along this line should learn to do it, and do it early, not hesitate to do it. The "slaughter of tonsils" is a cry raised by the faddist, the ultra conservative, the anti-surgical society. They are conservative in the wrong direction, because today the watchword is conservation of health and life, and that is just the reason we take out tonsils.

The paper does not reflect credit upon the essayist. This we say, frankly, is for the good of all concerned, including the author of the paper.

DR. KENYON (Chicago): I am very pleased that someone has had the courage to rise in this body and say that the present status of tonsillectomy was not wholly right; and yet I feel with Dr. Corwin that we must not become hysterical, and that there is no reason for becoming hysterical with respect to this operation.

Unfortunately, in all medical practice, we are confronted with a situation. Something has to be done. The patient has to be gotten well. Consequently, it seems to me that we cannot wait for theories with respect to the function of the tonsil or to the manner

in which infection from the tonsil is carried into the circulation, to be found out. The house is on fire, meaning the general house, and the fire must be put out.

When tonsils are presented to us for consideration, they come to us perhaps in three lots, first, with a history of acute tonsillitis in the past; second, with provable chronic tonsillitis; third, without history of acute tonsillitis and without provable chronic tonsillitis; fourth, adenoids with tonsils which appear not to be infected. Now then, my position is this, in every case where there is real reason to believe that the tonsil may constitute an infection atrium leading to some internal trouble which has been discovered, that tonsil whether it can be proven to be diseased or not, should be thoroughly extirpated. On the other hand, however, with those tonsils unassociated with general infection, whether there is, or is not, evidence of local disease in the tonsil, it seems to me that no good reason whatever exists why those tonsils may not be legitimately experimented upon by conservative methods.

I desire to say this, with reference to Dr. Harrison's paper, that if he or anybody else has intelligence enough to bring about a situation by which infection in the tonsil can be gotten rid of without complete extirpation of the tonsil, I wish him success. As for me, I have not been able yet to satisfy myself with respect to the advantage of this particular method which Dr. Harrison advocates.

One word more with respect to tonsillectomy itself. I take positive exception to Dr. Corwin's statement that where the surrounding structures are not injured there may be no serious mechanical result from tonsillectomy. That I know not to be true, and I wish to tell you why it is not true. To repeat, there may be a most serious mechanical result from tonsillectomy even when performed with the most supreme skill, such as Dr. Corwin employs. Why? For this reason, because the soft palate is not built equally long in all cases. There are patients who have constructively a relatively short, soft palate. In those cases, beware, for almost any tonsil operation will result in a permanently nasalized voice. Fortunately, they are rare. Practically, we as surgeons, should have such a possibility in mind when we consider a tonsil operation.

Dr. Harrison, Quincy (closing discussion):

Where I was sitting I could not hear the discussion of the paper very well, but suppose I escaped fairly well from an encroachment on the *time being* forbidden ground.

It may seem to *some* like "Fools rush in where angels fear to tread." Yet "Fools make *feasts* and wise men eat them." However, I consider this subject timely and regret I did not make myself better understood by the use of the charts, which were excluded by the lack of time. I am absolutely opposed to the inordinate removal of tonsils, *especially* in children, as practiced by *many* today. The middle ground of reason will obtain sooner or later.

A SIMPLE AND ACCURATE TECHNIQUE FOR FOREIGN BODY LOCALIZATION.

J. R. BUCHBINDER, M. D.

Associate in Surgery, Northwestern University Medical School

CHICAGO.

Operations for the removal of foreign bodies constitute a comparatively small part of the work encountered in civil surgery. The relative infrequency of such cases is perhaps the chief reason for the difficulties which we so frequently encounter. On the other hand, the past four years (because of the great importance of the work in military surgery) has seen the development of a host of methods and of apparatus. The great number of widely differing techniques described, tend to suggest the difficulties that we have repeatedly found on practical test. The basis of the suggestions that I wish to present in this paper consists of the study of approximately two thousand cases in a base hospital during the summer of 1916.

The various methods of localization, the vibrating magnet of Bergonie excepted, group themselves about and are directly dependent upon radioscopy as a central feature, usually some type of geometric apparatus being used to augment the latter. Cumbersomeness and lack of adaptability to all types of cases constitute the chief objections to most of them.

The ever-present probability of misinterpretation eliminated simple radioscopy as a method of any value, even in the simplest type of case. I refer particularly to the common method of taking two views in planes perpendicular to each other. I have several times seen necessary a prolonged search for a piece of needle in the hand when this method of localization had been used. I believe that the same objection holds good in the use of intermittent screen control, a method much mentioned in the French literature.

The various compasses, profundometers and radioscopimeters are, many of them, very ingenious mechanically, and by their use the depth of a foreign body from the surface may accurately be determined, results being obtained in centimeters or inches. It is not possible, within the scope of this paper, to include a description of the minutiae of these various types of apparatus. The universal objection to all methods of localization by geometric means is that they do not give the operator a clear mental picture of the

anatomic relations about the foreign body, nor do they clearly indicate, at all times, the most favorable place for incision. This latter point is often a most important one. Moreover, with the above mentioned methods, considerable time is consumed, usually thirty to forty-five minutes.



Fig. 1. A shrapnel bullet near the neck of the femur. One of the easier types.

We have used Furstenau's method of measurements and have found them to be universally applicable, but possessing the above mentioned objections.

In looking over the literature on this subject I have noticed that surprisingly little attention has been paid to a relatively simple procedure, but one far more accurate than any other method I know. I refer to a stereo-radioscopy, aided by "markers," and the identification of sinuses and of other fixed landmarks by means of probes and other objects impervious to the rays. The method that I wish to present is that which for the past five years has been used in the clinic of H. M. Richter at the Wesley Memorial Hospital. Its value was unappreciated until we faced the problems presented in hundreds of shell, shrapnel and bullet wounds, where rapid and accurate localization was a consideration of prime importance.

A marker in the form of a small piece of lead (of a definite outline to avoid confusion with the foreign body) is fastened, by means of adhesive, to some point on the skin, usually the wound of entrance, or if there be an exit wound,

both. In an article devoted to the localization of foreign bodies within the chest, Emil Beck suggests the use of wire netting.

An additional marker is now fixed to the skin overlying an adjacent subcutaneous bony prominence, such as a maleolus, or the anterior superior iliac spine, etc. The point of contact between skin and marker is designated by the use of an indelible stain, such as fuchsin. The marker may then be removed after the picture is taken, without losing relations.

The advantages of the method become obvious when such a "stereo" is examined. The markers, because of their peripheral location, intensify the stereoscopic effect of the picture to a degree of brilliance that is astonishing. In the one picture, the relation between foreign body, wounds of entrance and of exit, and of the adjacent bone can be seen as though one were examining a gelatine cast of the part. The distances between the fragments and the wounds as designated by the markers, can accurately be measured; the perspective rendered furnishes an exact idea as to depth. Our percentage of failures, with any but exceedingly small fragments, has been negligible.

There is a type of case worthy of special mention, namely, a foreign body in an anatom-



Fig. 2. Shell fragment in pelvis. The wound of entrance was in the groin as designated by the marker just below the fragment. The outline of the finger in the rectum may be seen; also that of the probe passed through the sinus to the fragment, which lay in the pelvic fascia in front of the coccyx. Probe designates course of fragment.

ically-complicated situation. I refer particularly to the pelvis, the skull and the chest.

A common injury of the present war consists of a shell fragment or bullet lodged within the true pelvis. The wound of entrance is commonly the groin or buttocks, the fragment lodging frequently in the cellular tissue in the vicinity of the coccyx or public bone. A tortuous fistula connects the fragment with a suppurating wound. Removal of such a foreign body is imperative. Here, because of the frequent difficulty encountered in obtaining a brilliant stereo of a large pelvis, we augment the x-ray still further.

The wounds of entrance and of exit are marked in the usual manner. Markers are also placed on the skin overlying the symphysis and one of the sacral vertebræ. A probe is next passed into the sinus as far as it will go; not infrequently contact with the foreign body will be felt. The probe is steadied with adhesive. Contact between probe and fragment may be an illusory finding and should not tempt one to try to extract the fragment by following up the probe, unless careful study shows this to be the route of election. Not infrequently such a marked picture will demonstrate a far simpler route.

The finger is now passed into the rectum and a picture is taken. Thus we have, augmenting the perspective, the vertebral spines, the pubic bone and the wound of entrance, peripherally, centrally, the rectum, as represented by the finger, while the probe shows throughout its entire length the relations between the route traversed and the neighboring anatomic structures. The patient is now removed to the operating room and anesthetized; the probe is left in situ until the fragment is found. In this manner we have been able accurately to localize fragments whether they lay just in front of the coccyx, or just behind the pubis. To obtain an accurate idea by any other method, of relative distances in the pelvis, we have found very difficult. And while a fragment may pass through the groin and lodge somewhere in the pelvis without injuring any important structure, it will usually be very difficult to follow up this route for its extraction. In failing to give one a mental image of the anatomic relations of the fragment, the various other methods mentioned, also fail to indicate the most favorable location for incision.

In a similar manner, fragments lodged in the chest and in such parts of the skull as the

superior maxilla and accessory sinuses, may easily and accurately be localized. Another adjunct to the stereo that I wish to mention is the electro-magnet of the non-vibrating type.

Fragments lying free within an abscess cavity may change their position when an incision is made, and be lost to the examining finger or curette. Into such a cavity we slipped a specially made steel rod of about the diameter of the index finger and some six inches long. The core of the magnet was then brought into contact with the outer end of the "finger," which is then withdrawn. Our failures were chiefly with copper fragments (bits of shell fuses) and with copper-jacketed bullets, usually minute splinters of the latter.

Fragments lodged in the subcutaneous tissues within an inch or so of the skin, we localized by



Fig. 3. Wound of entrance designated by marker, right malar bone. The fragment was removed from the opposite temporal lobe.

passing the core of the magnet over the suspected areas; the attraction between magnet and fragment produced an elevation of the skin directly over the fragment.

Among the various types of injury encountered, penetrating wounds of the knee joint caused by far the highest mortality. We have frequently found a serous effusion in the joint following a septic wound, produced by a fragment lodged just beneath the articular cartilage of the tibia. I believe that in these cases our markers saved a number of lives.

In presenting these suggestions I feel that they constitute a technique that is not only the simplest, but also the most accurate, and one

that we have found, on long-tried experiment, to be almost universally successful.

SYPHILIS OF THE NEW BORN.

A. W. STILLIANS, M. D.

Attending Dermatologist, Cook County Hospital; Consulting Dermatologist, Chicago Lying-In Hospital; Professor of Dermatology and Syphilology, Chicago College of Medicine and Surgery.

CHICAGO.

The new born may have been infected before birth or may have acquired syphilis during or after birth. Acquired syphilis is rare in infants and corresponds closely in its symptomatology with the disease in older patients. This paper will be devoted to a brief consideration of some of the important features of the congenital form of the disease. It differs from the acquired form in several respects, the first of which is the absence of a primary lesion. It may be, as some claim, that the chancre is located in the placenta, or it may be that congenital syphilis is a direct infection of the blood, syphilis d'emblee. This has been looked at askance by most syphilologists as a very doubtful possibility. The frequent lack of a history of the chancre has been explained as a failure to observe a small lesion, or the location of the primary lesion in the vagina or urethra, where it was hidden from observation. Vedder¹ has recently come out in support of the theory of direct infection of the blood as much more frequent than has been thought and cites a number of cases that are hard to explain in any other way. In the congenital cases the failure to find a definite lesion in the placenta, the flooding of the fetal tissues with organisms, and the infrequent involvement of the lymph glands might be cited as favoring the theory of direct infection.

In the rest of its course congenital syphilis does not vary remarkably from the schedule laid down for the acquired form. The secondary symptoms appear in most cases (about 75 per cent., Pusey²) within two months after birth, and the tertiary at any time after that, usually at puberty if not before. It is said that recurrence of the secondary symptoms is less common in the congenital form than in the acquired.

Most striking of all differences, however, is the much greater severity of the symptoms in the congenital cases, which is only to be expected in view of the mode of infection and the tender

tissues involved. Early involvement of the internal organs, especially the liver, kidney and spleen, are responsible in large part for high mortality among these children, and Buschke³ emphasizes the frequency of mixed infections, even in intrauterine life, as deserving a large share of the responsibility. Such involvement of the internal organs causes the emaciation and sallow, wrinkled, often severely icteric skin which is so characteristic and warrants the comparison to the appearance of a weazened old man. Involvement of the internal organs is quite common in early acquired syphilis, as Wile⁴ has shown, but is of slight consequence compared to that of the congenital disease. Early bone lesions, which are of slight importance in acquired syphilis, are common and severe in congenital syphilis. Osteochondritis, resulting in pseudo-paralysis because of the pain resulting from any movement, is sometimes the first symptom, and the irregular yellow line at the epiphyseo-diaphyseal junction denoting it is the most important and constant port-mortem finding. Dactylitis and involvement of the cranial bones, often with the formation of exostoses, are not rare.

Mucous membrane involvement adds to the picture of severity. The rhinitis is often hemorrhagic, and the occluded nostrils, surrounded by plaques broken by fissures radiating from the mouth and nose, make an impression that is not easily forgotten. The fissures cannot be forgotten for they perpetuate their memory by the scars they leave behind, which are diagnostic. Laryngitis, causing the high pitched cry of the syphilitic infant, and mucous patches at the corners of the mouth, are commonly present. The mucous patches, and the so-called mucous patches upon the skin about the genitals, are somewhat more apt to ulcerate than in the adult type.

The skin symptoms also manifest the greater severity of the disease in the infant. Mention has already been made of the infiltrated plaques about the mouth, nose and anus. No parallel to them occurs in the acquired form. Patches of sharply defined erythema occur about the genitals, extending down the thighs, and may show some infiltration, but fissure only near the mucocutaneous borders. Like the macular roseola, the erythema often desquamates, and on the palms and soles produces the peculiar wrinkled, shiny, atrophic appearance which is characteristic of the disease. A similar appearance in adults is

rarely produced by the tertiary squamous syphilide of the palms and soles. The macules of the congenital form are more apt than those of the acquired form to be rose colored rather than copper, to involve the face and the diaper area rather than the trunk and extremities, and to desquamate, which the acquired roseola never does.

There is, perhaps, no skin lesion so characteristic of congenital syphilis as the bullæ occurring upon the palms and soles and sometimes higher upon the extremities. There is no parallel for these in secondary acquired syphilis. They are often vesicles in size, have a rather thick epidermal roof, but rupture easily in spite of this because of the maceration of the tissue. They are sometimes hemorrhagic. In fact, hemorrhages of various kinds are not infrequent in severe cases of congenital syphilis, while in the acquired form they are always microscopic, giving the yellow tinge seen in the lesions when under pressure of the diascope. Moist lesions on the skin, macerated macules or papules and the resulting flat condylomata, are as common and as infectious in the congenital form as in the acquired.

Taking up very briefly the differential diagnosis of syphilis from other skin eruptions common to the new born, one of the earliest eruptions of infancy is a toxic dermatitis manifested by a number of bright red, ill-defined patches of erythema within which are nodules with a firm white center. This comes on a few days after birth and clears up spontaneously in a short time. No lesions of lues are so ill-defined; none have hard, white centers and none are so definitely self-limited.

Intertrigo may occur very early, but its borders fade into the healthy skin, showing the fine macules, maculo-papules or vesicles of dermatitis, which become fewer and farther apart as the border is approached, and the macerated areas are also poorly defined, instead of the sharply defined erosions of the so-called mucous patch. Simple drying and soothing measures cause intertrigo to disappear rapidly.

Miliaria crystallina and miliaria rubra are too familiar as the heat eruptions to merit attention. They, like intertrigo, or dermatitis from any other irritation, are composed of individual lesions smaller than any of the syphilides and clear up promptly on removal of the cause.

Pemphigus neonatorum has, unfortunately, become of late a familiar disease in this locality and has, in several instances, been confused with syphilis. It originates as a single bulla or a small group in the folds of the body, about the navel, or wherever the infection has been deposited, and spreads by jumps to other parts, only by accident showing any symmetry. The bullæ are usually larger than those of syphilis, do not favor the palms and soles, are very superficial and rupture early, leaving a red macule surrounded by a collarette of scales. This macule shows no infiltration and clears up more rapidly than a syphilide would.

In all these diseases the multiformity of eruption characteristic of syphilis is lacking, no spirocheta pallida can be found in the moist lesions, and the Wassermann reaction is negative. The search for spirochetes is very valuable in congenital lues, for they are very plentiful in the moist lesions, including the bullæ. The Wassermann reaction for some reason cannot be depended upon before the end of two weeks after birth, for earlier than this the child may give a false positive reaction, or a negative which later becomes reversed. After the second week the serum of congenital lues gives a very strong and persistent positive. Whatever is necessary to make the diagnosis of syphilis sure should be done before treatment is instituted. The therapeutic test as a diagnostic measure is seldom necessary, at least in the early stage of which we are speaking, is often misleading and should not be resorted to until everything else has failed.

The prognosis of congenital syphilis is important. Just now we are trying to convince the public that syphilis is not necessarily a venereal disease with the stigma of immorality attached, and that it can be cured, a few eminent authorities to the contrary notwithstanding. We must try to convince them also that congenital syphilis is not necessarily hopeless. Etienne, who cites a mortality of 95 per cent. in untreated cases, lets a ray of sunshine in upon the dark picture by quoting only 10 per cent. of deaths in the cases given proper treatment. The estimation of the prognosis from the age at which the first manifestations appear is familiar to all. An important factor to be considered in every case is the general condition of the child and its ability to maintain its nutrition. A case in point recently came to my attention. A baby showed

at birth the typical bullous lesions upon the palms and soles, which alone should have sealed its fate. But instead of the weakened, marasmic infant so often seen in such cases, the child was well nourished at birth and the mother able to furnish a good supply of its natural food. In consequence it is now, at three months of age, free from symptoms except the Wassermann reaction, and is gaining weight normally. However grave the prognosis, no effort should be spared to give nature a chance to prove our gloomy prognostications wrong.

The best treatment of congenital syphilis is prophylaxis. Adequate treatment of men and women before marriage, with prevention of marriage until the infectious stage is past, and avoidance of conception, when syphilis appears in married people, until treatment has made it safe, are measures of the greatest importance to the coming generation. If infection of the pregnant or conception in the syphilitic do occur, vigorous combined treatment, begun early, can often prevent infection of the child. Such cases are continually occurring and remaining hidden until it is too late for proper treatment. A routine Wassermann reaction early in every pregnancy should be the rule in obstetrics just as much as a routine examination of the urine. One healthy baby is worth many blood tests.

While prophylactic treatment is being considered, let us not forget the nurse. Most training schools for nurses now give short courses in syphilology, but a nurse taking a case of congenital syphilis should always be given a warning of the danger from the mouth, genitalia, or moist lesions elsewhere, as upon the palms. Of course no one would suggest a wet nurse for such a case.

There are few greater tests of the good judgment of the physician than the intensive treatment of the pregnant. To give sufficient treatment with mercury and arsphenamin to control the infection and save the child and at the same time avoid overtaxing the mother's organs, already heavily burdened, is a delicate problem. Constant scrutiny of the urine, small doses of the neo rather than the old arsphenamin, and an interval between courses of mercury and arsphenamin, with especial attention to any symptoms that may indicate intolerance, are the cardinal points. No anxiety need be entertained because the Wassermann reaction is slow to yield, for it

is especially strong during pregnancy, strengthened, as Falls⁵ suggests, by the normal increase of lipoids at this time.

Treatment of the infected child should be prompt, energetic and persistent. Short intermissions now and then are often of benefit, but the chief rule of treatment is persistence. When at last the Wassermann reaction has become negative, further treatment is necessary to keep it so. As in the treatment of adults, an examination of the spinal fluid should be made before deciding that the time has come to cease active treatment. Even after all signs have long been negative a course of mercury once or twice a year is a valuable precaution.

30 North Michigan Avenue.

REFERENCES.

1. Vedder, E. B.: Syphilis and Public Health, 1918, p. 128.
2. Pusey, W. A.: Principles and Practice of Dermatology, 1917, p. 627.
3. Buschke, A.: Riecke's Lehrbuch der Haut und Geschlechtskrankheiten, 1912, p. 700.
4. Wile, U. J.: Visceral Lues, Jour. Mich. Med. Soc. 1917, xvi, 317.
5. Falls, F. H., and Moore, J. J.: Jour. A. M. A., 1916, lxxvii, 574.

THE SUBMUCOUS RESECTION OF THE NASAL SEPTUM.*

A. J. BLICKENSTAFF, M. D.

PEORIA, ILL.

In recent years the submucous resection of the nasal septum has been considered by most authorities as the most efficient means of relieving intranasal obstruction when due to septal deformities. There are, of course, other methods which may in certain cases be successfully employed for the relief of intranasal obstruction, due to septal deformities, but the submucous resection is the method of choice, and will correct every variety and degree of septal deformity with the most satisfactory results.

In certain cases a spur or ridge upon the septum may be removed with the septal saw or spoke-shave, and the intranasal obstruction thereby relieved, but it is not considered good surgery. In cases where it is not necessary to do a complete submucous resection, it is preferable to remove the spur or ridge causing the obstruction by the submucous method, because present-day intranasal surgery requires the preservation of all healthy mucous membrane. In most cases, however, a complete resection is indicated, because

*Read before the Peoria City Medical Society, October 1, 1918.

a high deflection impinging upon one or the other middle turbinate is usually present. Hence, removing the spur only does not give complete relief.

As an aid to a better understanding of septal irregularities and the method of their correction, I will briefly call attention to the structure of the septum. The bony septum consists of the vomer below and posteriorly and the perpendicular plate of the ethmoid above and posteriorly. The anterior or cartilaginous portion of the septum is formed by the quadrilateral cartilage. The vomer articulates below with the palatine and maxillary crests; above with the sphenoid, the perpendicular plate of the ethmoid and the quadrilateral cartilage. Cartilage and bone are encased in separate coverings, as periosteum is only continuous over sutures when bone articulates with bone; e. g., perpendicular plate of ethmoid and vomer. Until the seventh year the septum lies in the mesial line, deviation under this age being very rare; but after this it is very often deflected to one or the other side; in fact, symmetry is rarely ever found in the adult septum. Hence, slight deviations are not to be considered abnormalities, and certainly do not often give rise to symptoms.

Septal deformities consist in deviations, bony or cartilaginous ridges and spurs which are in some instances so marked as to cause complete unilateral or even bilateral nasal obstruction. Ridges and spurs are frequently situated along the articulation of the vomer with the cartilage and perpendicular plate of the ethmoid running obliquely backward and upward towards the sphenoid. They may be found upon a comparatively straight septum and then are usually near the nasal floor and anterior. More frequently they occur upon the convex side of a deflected septum. In almost all pronounced septal deformities the cause is some form of traumatism. In less pronounced deformities an essential factor is a pathological over-nutrition due to inflammation of portions of the mucous membrane, as in chronic rhinitis and in traumatisms of lesser violence.

The symptoms attending septal deflection are those arising from contact of intranasal structures, and obstruction to respiration and drainage. Contact results in intumescence of the turbinate bodies and consequent nasal catarrh. There frequently is hypertrophy of the middle and inferior turbinates on the concave side of a deflected septum due to suction or vacuum hyper-

emia. Obstruction to respiration prevents the nose from performing its most important function, viz.: to warm, moisten and filter the inspired air. Obstruction to drainage results in nasal catarrh and predisposes to acute inflammation of the accessory sinuses. Septal spurs are frequently associated with tinnitus aurium and catarrhal deafness which is usually greatest on the side in which they are present. Various reflex neuroses, hay fever and asthma are frequently coincident with septal deflections.

Indications: In some patients slight or even very marked deflections may produce no subjective symptoms. It is only when the faulty construction is associated with deleterious symptoms that the operation is justified. In all cases where intranasal contact, obstruction to free respiration and free drainage can be relieved by a submucous resection, it is not justifiable to sacrifice any part of a middle or inferior turbinate in an effort to secure the same results. In some cases the operation is justified in order to remove a spur so as to obtain free use of the eustachian catheter. It may also be done to correct an external deformity in cases where the quadrilateral cartilage has been dislocated from its intermaxillary articulation to such a degree that it protrudes from the naris. To correct such a deformity requires the complete removal of the free end of the cartilage. In some cases of marked deviation we find an unilateral atrophic rhinitis, the atrophy of the mucosa and the crusts being usually on the concave side. Resecting such a septum cures the condition.

Contraindications for operation are, syphilis, when not under complete control, diabetes, nephritis, hemophilia, active tuberculosis and children under twelve. The operation should be practically limited to adults, at least it may well be deferred until the patient has arrived at an age when he has sufficient self-control so that it may be done under local anesthesia.

In going somewhat into detail as regards the technique which I employ, it is not with the thought of presenting anything new or original, but because I believe it is a technique by which any septum, however deformed, can be successfully resected and reconstructed. It is essentially an office operation, but should in some cases be done in the hospital. The patient should be in a semi-recumbent position as it prevents the dizziness and nausea sometimes experienced, and is in

every way attended with less discomfort than when the patient is operated on in the sitting position. Anesthesia is secured by packing the nose closely with strips of cotton saturated in a 4 per cent. solution of cocaine and adrenalin 1-1,000, in the proportion of one dram of adrenalin to an ounce of the cocaine solution. All the solution possible is squeezed out of each pledget of cotton before placing it in the nose. I begin packing on the floor of the nose, packing upward along the side of the septum to the lower margin of the middle turbinate. Then very thin pledgets of cotton are used to pack high up between the middle turbinate and the septum, from above downward until the nasal cavity is completely filled. The other side is packed in the same manner. The packing should be left in twenty minutes. This will produce prolonged and complete anesthesia so the operation can be performed without actual pain. Just before beginning the operation the area of the primary incision should be infiltrated with a 0.4 per cent. solution of novocain and adrenalin in the proportion of 5m adrenalin to 2 drams of novocain solution. The incision is made on the convex side, somewhat similar to that of Kilian, beginning well forward upon the mucous membrane and about one centimeter from the dorsum of the nose, coming forward to the muco-cutaneous junction, then down to and across the floor of the vestibule of the nose. The incision is carried to cartilage on the septum and to bone on the nasal floor. The elevation of the mucous membrane is started with a flat straight elevator and continued with a dull curved elevator working directly back parallel with the ridge, if one is present, beyond all deviated parts. Then tilting the distal end of the elevator up it is brought forward and the entire upper part of the mucous membrane is separated with one movement of the instrument. I then elevate down to the apex of the ridge, if one is present, if not, to the floor of the nose, always working from behind forward, as it is less difficult because of the arrangement of the periosteum and perichondrium. Next I use a flat straight elevator to elevate the periosteum on the floor of the nose and up under the ridge. If any mucous membrane still remains attached to the apex of the ridge, it can be sheared off with the sharp edge of a straight elevator. The incision through the cartilage is made about one-fourth-inch pos-

terior to the primary incision in the mucous membrane. This leaves an anterior vertical strip of cartilage for support and also assists in preventing permanent perforation at this point. Through the opening in the cartilage the mucous membrane of the opposite side is elevated over a similar area and in like manner. The mucous flaps are then retracted with right-angled wire retractors and held by an assistant, or if working alone, some form of self-retaining speculum is used. The septal cartilage is removed with a Ballenger swivel knife, leaving a strip of cartilage one-fourth-inch wide along the dorsum of the nose for support. With a strong narrow bladed scissors a notch is cut in the perpendicular plate of the ethmoid in line with the margin of the cartilage left above. This is done to lessen the danger of fracturing the cribriform plate in removing the perpendicular plate of the ethmoid. For removing the ethmoid and vomer a Demarest forceps is used. The maxillary crest is removed with a Lutz forceps or a V-shaped chisel and mallet. All loose fragments of bone and cartilage must be removed and hemorrhage controlled before the flaps are brought into apposition. The cut edges of the mucous membrane should be approximated as accurately as possible. It is not often necessary to use sutures. Each side is carefully and rather firmly packed with long narrow strips of iodoform gauze well vaselined. This holds the flaps in apposition, controls hemorrhage and prevents the formation of hematoma. The packing should be left in situ from 24 to 48 hours. After the packing is removed the nose is inspected and the patient instructed not to blow it for the first 12 hours. Later treatment consists in shrinking the congested parts with cocaine and adrenalin and cleansing daily with a normal saline or weak Dobell's solution.

The submucous operation should not be regarded as being without danger. It may be attended with serious complications or sequellæ, hence the strictest asepsis should be observed. The most important complications are infection, hemorrhage, hematoma, septal abscess and permanent perforation of the septum.

The operation is sometimes quite difficult, but when properly done, complications are rare and healing is surprisingly prompt. The nasal stenosis is always relieved, the reconstructed septum is restored to a perfect function and other symptoms gradually disappear. I believe no other

operation is done in the nose which is so uniformly satisfactory to the patient.

EPIDEMIC ENCEPHALITIS IN CHICAGO. AN ANALYSIS.*

ALEX. S. HERSHFIELD, M. D.

Chicago Department of Health,

CHICAGO.

Aroused by the recent reports filtering in of an encephalitis of a new type assuming epidemic proportions in Europe, and intimation of the presence of a few such cases in Chicago and, too, to allay a growing public apprehension, Dr. John Dill Robertson, Commissioner of Health of Chicago, early in March of this year called a number of physicians in conference to take immediate and decisive action in dealing with the disease should the situation warrant.

It was learned that a very small number of cases were in the city and although insufficient data were at hand as to the exact nature of the disease, nevertheless, it was thought advisable to request physicians to report all known cases of encephalitis so diagnosed to the department of health.

This would serve as a check on a number of cases in the city and enable the health authorities to note the prevalence and distribution of the disease within the city limits.

To be further forearmed, the commissioner of health thought it prudent to make a survey of all the reported cases in order to gather all the available data relative to the epidemiology, etiology, virulence, mode of transmission and distribution of this disease, and also to determine the necessity of isolation and quarantine of patients so affected. At the same time, circumstances permitting, to note all the important clinical manifestations of the disease, to establish, if possible, a diagnostic criterion.

To this end, I was assigned to make an investigation of the situation in the field, and obtain all the information that would be of value in aiding the foregoing purpose.

Beginning on March 21, 1919, and working up to and including April 19, 1919, I investigated 42 cases reported as epidemic encephalitis.

Of this number but 15 could, in my opinion,

be accurately defined as epidemic encephalitis, according to the clinical standards established by the Austrian, French and English observers. Six of these cases were distributed in various hospitals, and nine were given medical care at home. Two cases originated out of the city, one in Iowa and one in Camp Sherman, and were brought here for treatment. Of the cases in this series, seven patients died, and eight are still living.

Distribution of the cases within the city limits. These 15 cases were widely scattered, and were distributed through the city as follows: 3 on the north side, 6 on the south side, 4 on the west side and 2 originated outside of the city.

Mode of transmission. No two cases developed in the same family. So far as I was able to determine, none of the patients were related, and none were in known contact with each other. So far, the mode of transmission of the disease is merely conjectural.

Sex. Eight females, seven males.

Age. Youngest five years; oldest 53.

Between 5 and 15 years, inclusive.....5

Between 16 and 25 years, inclusive.....4

Between 26 and 40 years, inclusive.....3

Between 41 and 55 years, inclusive.....3

Occupations. These were varied and probably had no influence in the etiology of the disease.

Previous History. Influenza. Three patients gave a distinct history of a previous attack of influenza. Twelve either denied previous influenzal infection or did not remember. Alcoholism and venereal disease were denied in this series. On the whole, all patients claimed to be well immediately before onset of the disease.

Onset. The earliest onset in this series was February 1, 1919. In most of the cases the onset was comparatively sudden with but few prodromal symptoms.

Symptoms. The following symptoms were gleaned from the histories and the examination of the patients, and are given in the order of their frequency:

Temperature. All patients had more or less febrile reaction during the progress of the disease. It varied greatly in different and the same patient, and ranged from 96° to 106° Fahrenheit. Pulse and respiration in the main were in direct

*Read before the Chicago Medical Society, April 30, 1919.

ratio to the temperature changes. In one patient, pulse remained above 120 and respirations about 50 until death.

Drowsiness. This was observed in 11 patients. Some mental clouding, weakness and passivity, probably make up the condition of drowsiness. The patients in most instances could be roused to respond to some questions and to take nourishment. In some patients the apparent drowsiness deepened to stupor and a few lapsed into coma. In all, there was a mental hebetude and an especial listlessness that was striking.

Ocular disturbances. Diplopia was noted in 10 of the patients, and squints in seven, especially the divergent type. In five there was a true ptosis of one or both lids. In seven there was a sluggish reaction of the pupil to light; in two there was no pupillary response; in three a photophobia and a temporary blindness in one. Did not note nystagmus in any of the cases.

Babinski sign. This sign was found in the majority of cases, indicating thereby the involvement of the central nervous system.

Tremors. This was found in eight of the patients, and includes twitching of the paralyzed or paretic limbs. Some betrayed this symptom in all of the muscles of the body when handled or during the course of the examination. It was not constant. The tremor is coarse and irregular.

Headache. This was a chief complaint in but six of the series, and when it occurred was very severe, and most occipital in type. It occurred mostly at the beginning of the disease.

Paralysis. Exclusive of eye paralyses which were noted above, 10 cases showed paralyses in various forms, as follows: Complete face, arm and leg, two; arm and leg, six; both legs, one; face, one. Muscular paresis was noted in some cases preceding the paralysis. Some patients had a weakness in the fingers, arms and legs, without actual paralysis.

Spasticity. This was observed in practically all cases sooner or later, and three betrayed a rigidity for a time of the entire body. No marked neck rigidity in any patient of this series. If it did occur, it was transient.

Incontinence of urine and feces. This was charted in six patients. In one there was a first retention of urine and later incontinence; in four

patients there was a history of retention that soon gave way to normal control.

Convulsions. Recorded in four patients, three at onset and one in the course of the disease.

Vomiting. Noted in three patients as an initial symptom.

Speech disorders. This was observed in three patients, the speech was slow and almost scanning. The tongue was protruded slowly and not far out. It is difficult to state as to whether this is due to a paresis of the tongue muscles or to the mental hebetude of the patient.

Dizziness. Given by two patients as an initial symptom, and in both accompanied by vomiting.

Deglutition. Difficulty experienced by two patients but was not a protracted symptom.

Sensory disturbances. In one patient the entire left leg was analgesic and a similar condition in the right leg and buttock in another. One patient complained of pains in the legs for a period of four days.

Ankle clonus. Definitely found in one patient on both sides.

Reflexes. Knee jerk—Exaggerated in five, normal in five, absent in two.

Ankle—Exaggerated in five, normal in five, absent in two.

Elbow—Exaggerated in three, normal in four, absent in five.

Abdominal—Absent in five.

Mental condition. In one patient a low delirium for several days. One patient during the course of the disease became excitable, was very talkative and incoherent. In three of the recovered cases a depressed condition obtained and a noticeable indifference to surroundings.

Spinal fluid. Spinal puncture was performed on ten patients in this series. The pressure was slightly increased, if at all, and the fluid was in all cases microscopically clear. The bacteriological tests were negative. The cell counts were 5 to 120 c.mm. and consisted of mononuclear lymphocytes. Wassermann all negative. The Ross-Jones and similar tests made in this series were at one time or another positive.

Blood examination. Leucocyte count made on the blood of 11 patients; lowest count 8,000; highest 20,000; average 14,000.

Urine. Urine examined in nine cases; albumin found in four, granular casts in one.

No postmortem examinations were performed on any of the deceased patients of this series.

Duration of the active phase of the disease—shortest period 6 days; longest period 60 days; average about 32 days.

How much of a residual disturbance obtains in patients recovering from the disease is hard to say at this time, but there has been noted remaining spastic gait, paresis of limbs, speech difficulties, mental and emotional instability.

Therapeutic measures, so far as could be observed, were purely symptomatic.

CONCLUSIONS.

1. Epidemic encephalitis, as such, is a definite clinical entity.
2. With comparatively few cases reported in a city of nearly 3,000,000 population, epidemic encephalitis cannot be regarded as epidemic at this time.
3. Despite unknown etiology and conjectural mode of transmission, it is more than probable that the disease is communicable, and, therefore, patient should be properly isolated and officially quarantined.
4. Now that it is reportable by law, an effort should be made to hospitalize every known case of the disease to enable a thorough study as to its etiology and therapy.

PHYSICIANS' AUTO DRIVE.

AUX PLAINES MEDICAL SOCIETY JOURNEYS TO FORT
SHERIDAN—CHICKEN DINNER AT
HIGHLAND PARK.

Aux Plaines Medical Society terminated one of the most successful years in its history with a gala outing on Wednesday, June 25, that had as its destination Fort Sheridan military hospital. The organization added a feather to its cap by acquainting 244 members and their families with a tip-top spring chicken luncheon at the Moraine hotel in Highland Park.

The luncheon was only one of a series of happy episodes that marked the day. At 11 o'clock the men of medicine gathered at the West Suburban hospital in forty-six gayly decorated machines. On schedule time a uniformed bugler sounded reveille and the procession, being rounded up, sped merrily off on a

short-cut route that brought it to Highland Park via Sheridan road at 12:30. Some threatening clouds relieved their feelings when the party was nearing Winnetka, but they perked up soon after and the remainder of the day was one of warm sunshine.

After luncheon, served in the attractive glassed dining rooms of the hotel, there was time for a short climb down to the beach before the trumpet called the picnickers back for the second lap of the journey. Fragrant fields of sweet clover, long stretches of woodland, and mile upon mile of beautifully cared-for estates made the run a memorable one.

At Fort Sheridan Colonel Lewis, assisted by three other surgeons, held a special clinic for the Oak Park physicians and told of some of the wonders of reconstructive surgery. About forty patients in various stages of convalescence were exhibited. Especial attention was called to the marvels of nerve cures performed by the surgeons.

From Colonel Bispham, commander of the hospital, down to the most insignificant orderly, nothing was shown the visitors but the most gracious and intelligent hospitality.

Later there was a tour of the hospital, of the beautifully kept wards, the operating rooms, the lounge bright with music, flags and a number of pretty aids, of the reconstruction rooms where occupational therapy is taught the convalescing soldiers, and of the wide, airy sleeping porches. There are 3,500 patients in this, one of the largest hospitals in America, and 96 wards containing 100 beds each.

At Lake Forest, the next stop of the party, a personally conducted tour was made of J. Ogden Armour's grounds and gardens. The estate comprises 1,200 acres, including a great artificial lake. The gardens are modeled on English and Italian lines, and the beautiful fountain outside the main entrance is a direct copy of the fountain at Versailles. Later Mr. Armour himself arrived to extend a personal welcome, and the doctors shook hands with the greatest food purveyor in the world. The drive home had for climax supper in the marigold room at the Bismarck, with the attendant cabaret and dance.

Drs. F. L. Glenn, J. W. Van Derslice and R. G. Savage were on the committee and were largely responsible for the success of the outing. It was through the mediation of Arthur Meeker, a friend of Dr. Van Derslice, that the tour of Melody Farm was made possible. One of the happiest features of the day was the smoothness with which everything was run; there was not a single hitch to mar the train-like regularity of the program.

Everything conspired to make the day the most successful outing in the annals of the Aux Plaines, good fellowship, excellent management, an ideal choice of itinerary and fair weather. Even a small boy who had chosen Wednesday for his arrival at the West Suburban Hospital and one of the doctors of the society for his chaperon, added his good will, registering his first wail exactly five minutes before the procession started and allowing the doctor to join her fellow physicians.

J. B.

ILLINOIS MEDICAL JOURNAL

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State society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

JULY, 1919

Editorial

CHANGE IN EDITORS

At the June meeting of the Council of the State Society, Dr. Charles J. Whalen was elected editor of the ILLINOIS MEDICAL JOURNAL. This therefore, is the last number of the Journal which will appear under our editorial management.

After having edited the Journal for six years it is with a feeling mingled with pleasure and regret that we relinquish it. We have learned to rather enjoy the Journal, and it has brought

us in contact with many acquaintances. Because of this we regret leaving it. It is like parting with old friends. The work and hours of attention to tedious detail of advertising and management and the petty annoyances which come with it, we turn from with relief. It is a burden lifted, and we can again see some hours for recreation.

In June, 1913, strife within the Society left the Journal without an editor. As Chairman of the Council at that time, the responsibility of seeing that the Journal went regularly to the press fell upon us, and after a few months we were elected editor. At that time the Journal was published on the presses of the American Medical Association and under the domination of the editor of the *Journal of the American Medical Association*.

When we took charge of the Journal it was an increasingly losing proposition—the income being about \$3,500 annually. The general outlook for state journals was not promising. For the past several years the Journal has almost paid its way—the advertising income this year amounting to \$10,500; and if we believe the many complimentary statements heard, it has surpassed other state journals as a medical journal. This showing has given us a feeling of some pride.

On our taking charge of the Journal it was plainly apparent that something was radically wrong. Because of a difference of opinion as to the merits of certain advertising matter, we were informed we would either have to be governed by the American Medical Association or find another publisher. The Council believed we could conduct a journal, and unanimously voted to have the Journal published elsewhere, and also to be the censor of advertising copy. This program has since been followed.

Keeping the Journal financed has not been a light undertaking. Its former submission to the dictates of the editor of the *Journal of the American Medical Association* had hurt at least its financial standing. Only after the independence of the ILLINOIS MEDICAL JOURNAL was well established did it gain in clean ethical advertising or in a reputable standing. We are not criticising the *Journal of the American Medical Association*, but simply stating facts. It was apparent that the *Journal of the*

American Medical Association wished to destroy all independent journals and to absolutely control all state journals or destroy them.

The Journal has gone ahead, its policies—every one of them—endorsed and backed by the Council, gaining in popularity and also in financial status until the present time. To our critics who have criticised us adversely but honestly and fairly, we are under obligations. Those who have offered suggestions and a word of encouragement from time to time have helped to elevate the Journal, and we are appreciative. To those members who have aided us so generously with their counsel and with manuscripts, we are sincerely grateful. We could not have made a success of the Journal without them. Such aid has been both generous and invaluable.

The Editor elected to succeed us is known to all of our members, and an introduction is unnecessary. His activities in the Society as its President and member of many committees have demonstrated his ability to fill any position given by the Society. We ask for him only the continued generous support of the members and particularly of the Council and County secretaries.

There is at this time more important work for the medical societies than ever before, and these new activities will preface for the Journal the greatest activities of its existence. The great civil unrest and changeable times will bring about a great unrest and upheaval in medical relationships. It will bring to the medical editor an opportunity never before existing to help guide the profession. He may have much to say and to do in forming the future of the medical world. The old order of medical practice has passed and it will be the pleasure and the duty of the medical editor to not only illuminate the way but to guard jealously the honor, the traditions and the rights of the profession.

It will be the duty of the Journal to continue serving the society in a fearless way, keeping its independence, and be at all times ready to voice the wishes of the members, and to keep the society members advised of all things pertaining to medicine and public health.

Industrial medicine must be reckoned with. This, together with Compulsory Health Insurance, is one of the most important questions before the profession.

Questions of medical education and registration will continue to be prominently before us, as will questions pertaining to public health, both local and national. All these questions and many more must be met, and to meet them wisely and strongly the Journal must be free and independent of all restraining influence. If the Journal is to represent the profession of Illinois, the council must, as in the past, decide questions of policy, and the editor should not always be assumed as responsible for the views expressed.

Those members who are not always satisfied with original articles or other matters published should remember that this is a State Journal owned by each member of the society, and that each member has his rights, including his opinions, and as a member of the society should have representation and access to the Journal. A contributor's views may not at all correspond with the editor's opinions, but nevertheless should be given expression. Therefore when criticism is offered it is well to remember that perhaps you are criticising a member's personal opinions and privilege rather than the editor.

The opportunity for the JOURNAL to increase in size, usefulness, and influence, was never so great as at present. It must be made more influential and, with the society's assistance, its influence may be raised to a level second to none other, and this is our wish.

THE NEW PRESIDENT

Following the custom of many years, the JOURNAL presents the portrait of our new president, Major J. Warren Van Derslice, as a supplement in this issue.

DRAMA IN ONE ACT

Place: Meeting of Directors of State Departments.

Enter: Doctor Drake, Director of Public Health, and H. H. Parks, Assistant Director of Agriculture.

Doctor Drake: "Twenty-two thousand (22,000) people died in Illinois during the last epidemic of influenza."

Mr. Parks: "If that many cattle had died of a new disease in that period of time, there would

have been a special session of the Legislature to furnish relief."

The Institution Quarterly, December 31, 1919, IX, 296.

Yet \$333,000 has been appropriated for the "Double-headed Psychopathic Institute" and not one cent of it provided for research. Eighteen and a half million for custody and confinement and not one cent for cause, cure and prevention. This is business management of public affairs—some business. Kirk's Soap Factory has a research laboratory, with sixteen research men at work, besides a large service laboratory wholly separate for routine "industrial" work.

51ST GENERAL ASSEMBLY, ILLINOIS

HOUSE BILL 353.

"ONE CENT FOR RESEARCH FOR CAUSE, CURE AND PREVENTION, FOR EVERY DOLLAR FOR CUSTODY AND CONFINEMENT."

A bill to establish a Laboratory of Research into the causes of those diseases and conditions for which the Department of Public Welfare now provides the custody and confinement, and to place the same under a Board of Research Advisers in the Department of Health.

This bill was introduced by William G. Thon on March 13, 1919, at the request of the Secretary of the Society for the Promotion of the Study of Dementia Præcox. It was amended and passed to third reading on May 15, 1919. It was never called to third reading!

HISTORICAL

The Psychopathic Institute was established in 1907 by the "Code of Charities"—\$25,000 was appropriated for equipment—buildings were set aside for the laboratories, and wards provided at Kankakee State Hospital. The Institute was established "*to investigate the causes, the possibilities of cure and prevention of the conditions and diseases for which the Board of Administration furnished custody.*"

Dr. H. Douglas Singer was appointed director in 1908, with a salary of \$4,000 and perquisites, and he held that position continuously until July 1, 1917, when he became Alienist of the Department of Public Welfare—the successor of the Board of Administration. But no researches as provided in the preamble were

conducted, and the meager appropriations were not always expended.

On April 3, 1916, a contract was made between the Board of Administration and the Otho S. A. Sprague Institute, providing for co-operation in the study of the causes, the possibilities of cure and prevention of dementia præcox.¹ A building at the Chicago State Hospital was selected by the Director of Medical Research of the Sprague Institute, and vacated by the Superintendent of the Chicago State Hospital, but the year passed and the laboratory was not opened and the contract expired by limitation.

The Board of Commissioners of Cook County, in January, 1917, appropriated \$4,400 for biochemist and a bacteriologist and equipped a laboratory of Psychopathic Research on the fifth floor of the Psychopathic Hospital of Cook County Hospital. The writer was appointed Director. The Board of Administration lent one of their psychiatrists and two friends of insane patients furnished a small fund for supplies. Several students volunteered services. This laboratory closed at the end of the year on the insistence of the staff of the Psychopathic Hospital. The work of this laboratory is in process of publication in *Dementia Præcox Studies*.

During the summer of 1918 the Rockefeller Institute of New York was importuned by Norman Willard, a friend of the insane, to consider the propriety and expediency of undertaking research into the cause, the possibility of prevention and cure of dementia præcox, but after formal deliberation on his plea, the Directors were not moved to begin the research.

THE SURVEY, OR AUDIT

1. There are 250,000 insane in the 400 public and private asylums of the United States, of which number 140,000 are diagnosed dementia præcox patients.

2. There are 75,000 patients committed to the public and private asylums of the United States, each year, of whom one-fourth or nearly 20,000 are dementia præcox patients. In Illinois (4,000 and 1,000).

3. Dementia præcox patients rarely recover (21 in 21,070 during one year in New York²;

¹ *Dementia Præcox Studies*, April, 1918, Vol. 1, p. 118-124, et seq.

² Pollock, Horatio M., *Dementia Præcox Studies*, July, 1918.

they live in custody an average of 15 years, and die at an average of 50.

4. Sixty or more per cent of the State Hospital population in the United States suffer of dementia præcox, and these patients consume more than half the expenditures for the insane.

5. The present (51st) Legislature, has been called upon by the "Budget Estimates" of the Department of Public Welfare, for \$18,500,000, of which sum \$333,000.00 is for the Psychopathic Institute (to be moved to Chicago), but it is obvious from the items in this Budget Estimates that none of this sum is designed to be used "*for research into the cause, cure and prevention*" of any insanity, not even of dementia præcox, the dominant one.

This "Budget Estimate" was published in January, 1919, and thus it became evident that no hope "of research into cause, cure and prevention" was contemplated by the double-headed and greatly revived Psychopathic Institute. Under the caption of a "Central Group Hospital," *it was distinctly stated that the only hope of diminishing the growing expense of the Department of Public Welfare was in Research into Cause, Cure and Possibility of Prevention.*

After this grievous disappointment it seemed possible only to make a plea directly to the Legislature for a separate and independent laboratory of psychiatric research. In inspecting "the Administrative Code," it was found that there already existed in the Department of Education and Registration a Board of Natural Resources and Conservation, endowed with exactly those powers, privileges and duties needed to conduct a laboratory of research into the causes of the diseases of the victims for which the Department of Public Welfare undertakes housing and feeding, but does not attempt cure or prevention. This Board of Natural Resources and Conservation already conducts several of the State Research undertakings in Geology, Hydrology, Entomology and Agricultural and Animal industry.

The officers of the Society for the Promotion of the Study of Dementia Præcox presented their proposed bill and were astounded to find that some of the members of this board did not consider that such an investigation had anything to do with conserving the natural resources of the

State, and none of this Board were keen to further the objects of this bill. The Director of the Department of Education and Registration was interested but passive. The Superintendent of Charities did not at first recognize the propriety and desirability of placing this laboratory of psychiatric research outside the department of Public Welfare, but he at last expressed himself more favorably disposed. It was not possible for the writer or for the attorney who lobbied for this bill continuously to see the Director of Public Welfare with a view to securing his favorable consideration, if not his support.

On the 13th of March, 1919, the Bill 353 was presented in the House and referred to the Committee on Economy and Efficiency. A hearing before this Committee was secured on April 23 and the bill was unanimously recommended to the House to pass. Every member of the Committee was convinced that it was high time to begin research for prevention. (It had first reading April 25.)

Rev. Vincent Brummer, Secretary of the Epileptographic Society, has co-operated in furthering this bill, as it provides for appropriate research into the cause of epilepsy. He presented a petition which was signed by over 200 clergymen of the State of Illinois, including several bishops.

It was later brought to the attention of the majority leader of the House, who seemed to consider its advancement favorably, but suggested that the Bill be so amended as to place it under a "Board of Research Advisers" in the Department of Public Health. This seemed to meet the enthusiastic approval of the Director of Public Health, and the Bill 353 was so amended.

It was on the morning of May 15th that the writer first succeeded in seeing the Director of Public Welfare in regard to this matter. He learned then that the Director would not consent to researches under the Department of Public Health in institutions under his direction. He said that he approved of researches and proposed eventually to undertake them at the "Central Group Hospital" in Chicago, in which would be the Eye and Ear Infirmary, the Children's Orthopedic Hospital, a Psychopathic Hospital, a General Hospital for Instruction of Medical Students and the Psychopathic Institute. Thus the Director allowed that he proposed no immediate research into cause, cure and preven-

tion, as directed by the Code of Charities of 1907, nor would he allow Bill 353 to pass.³

That the Bill passed the House on second reading on May 15th, 1919, was due to the persistency of William G. Thon. It was never called to third reading and is dead.

During the two years to come, before another Legislature meets and has an opportunity to provide for a research laboratory into the causes, the possibilities of cure and prevention of any of the insanities, more than 8,000 patients will be legally committed to the State Hospitals under the Department of Public Welfare of Illinois, and 2,000 of these will be dementia præcox patients. And they alone will entail a direct financial liability to the State for custody alone of \$6,000,000.

This direct loss to the State Treasury is trifling compared with the indirect loss to the resources of the State by the distraction, consternation and loss in economic efficiency of the 10,000 members of the families from which these 2,000 youths will be snatched by an unknown and unstudied disease. There are presumed to be 1,200,000 families in the State; 2,000, or one out of each 600 of these families, must give up one member to be thrust into the "oubliettes" maintained under the Director of Public Welfare, and it is probable that not less than four of these drafts will fall on the unsuspecting families of the physicians of Illinois, who will have an opportunity to read these words.

This experience in legislation has furnished many surprises. The members of the Legislature are a very fine lot of serious, conscientious, capable and broad-minded men. The fashion of defamation of the character of legislators in newspapers, on the rostrum and in conversation seems to me wholly unwarranted by this experience of the writer, engaged in an effort to relieve human suffering and incidentally close half the State Hospitals.

It was related to me that the Director of the Department of Public Health was making a report at a meeting of the Administrative Heads. He said there had occurred an epidemic of a new disease of unknown origin, Spanish Influenza, which had resulted in great morbidity and the death of 20,000 inhabitants of the State during three months. The Head of the Department

of Animal Industry interpolated: "If an unknown epidemic had killed 20,000 cattle in the State of Illinois in three months, he would find out the cause of it, if it took special legislature to get the funds."

Nothing is so cheap as human life. Our official advisers do not all of them consider the youth of our State as "Natural Resources" worthy of conservation, and the Director of Public Welfare is willing to oppose (after he has failed to provide) immediate "research into the causes, the possibilities of cure and prevention of the insanities."

During the next two years the doors of legal commitment will shut 8,000 insane into hopeless, pessimistic custody in the mad-houses provided by the State of Illinois in its full maturity of a century's existence. BAYARD HOLMES.

THE RAT PROBLEM IN A NUTSHELL

1. The rats are polygamous.
2. Because of being polygamous, they have become a pest.
3. The cause of that polygamy is the plans at present in use for their destruction.
4. It is impossible for them to be a pest and at the same time polyandrous.

Above is the heading on a circular issued by W. Rodier of Melbourne, Australia. His argument follows:

Now, the way to exterminate the rats is to make and keep them polyandrous; that is, the males in excess of the females. To do this, only such plans should be used as catch the rats alive and uninjured. The females should then be killed, and the males let go alive, after cutting off portion of the tail, so that they will be known if caught a second time, and not counted. Keep an account of the numbers of females killed and males let go alive, by counting the dead females and the portions of males' tails cut off. Burn the lot. The reason for the above plan is to get an excess of males. When this is done, the males will persecute the females that cannot be caught, and stop them from breeding; they will also kill what young ones may be born, and when they largely exceed the females in numbers they will worry the remaining ones to death. By this means ALL the females are exterminated, and when this is done the males will then die off by old age, and so complete and entire extermination is brought about, and without any risk of disease or other drawbacks, and at a very reasonable expense. The greater the excess of males, the quicker the extermination.

To prove his faith, Mr. Rodier offers to wager £500 against £100 that his method of rat extermination is the best, the test to cover a series of years.

³ Charles H. Thorne's Report, Institution Quarterly, December, 1918.

Society Proceedings

Illinois State Medical Society

OFFICIAL MINUTES OF THE SIXTY-NINTH ANNUAL MEETING

HELD AT PEORIA, MAY 20, 21 AND 22, 1919.

MINUTES OF THE MEETING OF THE HOUSE OF DELEGATES

Tuesday Evening, May 20, 1919

The meeting convened at 8:00 p. m., on Tuesday, May 20, 1919, in the First Congregational Church, Peoria, Ill., President E. W. Fiegenbaum presiding.

Mrs. W. H. Gilmore, Assistant Secretary of the Society, presented the report of the Credentials Committee.

ROLL CALL

PRESIDENT FIEGENBAUM: The roll call and its verification reveals the fact that there is a quorum present, and we are ready to proceed with the business.

It is customary for the Chair at this time to appoint a Committee on Resolution to whom will be referred any resolutions offered by any member of the House of Delegates, not for consideration this evening, but referred to the Committee on Resolutions to report at a later meeting. The Chair will appoint on that Committee Dr. John S. Nagel, Dr. H. P. Beirne, Dr. C. W. Poorman, Dr. W. H. C. Smith and Dr. Andy Hall.

DR. N. M. EBERHART (Cook): I would like to ask either unanimous consent or a suspension of the rules for the purpose of getting the action of this House of Delegates in regard to the attitude of the Society on the Osteopathic Bill, which is being heard today and may be reported out tomorrow.

The matter is so urgent that it cannot wait to go through the resolutions channel. I would ask unanimous consent to take it up now.

PRESIDENT FIEGENBAUM: Unanimous consent is asked by the gentleman from Cook to express the attitude of this House of Delegates on the Osteopathic Bill that was on hearing in the Senate Committee this afternoon and may be reported out tomorrow. Is there any objection to taking this matter under consideration at this time? . . . There is no objection.

DR. H. M. EBERHART (Cook): This is Senate Bill No. 360, and it is open to the same objections

that have been offered against the other similar bills that have been introduced, in that it provides less requirements for the osteopath to practice medicine than are required from the regular profession, and there are other objectionable features. I have not prepared any set motion. I would be glad to have the matter discussed and perhaps get some suggestion as to the form from other members of the Society, but some definite action should be taken at this time so that word may be sent to our men there in Springfield at once.

Perhaps it might be well to have a small committee prepare a suitable emergency resolution or motion.

DR. T. O. FREEMAN (Coles): I move that the Chair appoint the necessary committee to draw up these resolutions and report back to the House before adjournment, and that the committee be composed of three members. (Seconded and carried.)

PRESIDENT FIEGENBAUM: I will appoint on that committee Dr. Eberhart, Dr. Humiston and Dr. Freeman.

Is there anything else of importance that ought to come before us now?

Then the next order of business is the reading of the minutes of the last meeting. Do you want them read?

DR. C. D. PENCE (Cook): I move that we dispense with the reading of the minutes of the last meeting and that we adopt the minutes as published in the JOURNAL. (Seconded and carried.)

The Secretary's report was read by the Assistant Secretary, Mrs. W. H. Gilmore.

SECRETARY'S REPORT, 1919

Gentlemen of the "House of Delegates": We beg to report the collection of the following funds, from all sources, from Jan. 1, 1918, to Dec. 31, 1918, and from Jan. 1, 1919, to April 30, 1919, inclusive:

	1918	1919
Adams	\$ 170.00	\$ 151.00
Alexander	63.96	.....
Bond	50.00	.....
Boone	42.50	48.00
Browne	17.50	23.00
Bureau	105.00	.....
Calhoun .....	.....	.....
Carroll	52.50	39.00
Cass	40.00	.....
Champaign	175.00	149.00
Christian	160.00	.....
Clark .....	.....	54.00
Clay	22.50	24.00
Clinton	31.50	.....
Coles-Cumberland	57.50	91.50

Crawford	80.00	70.50	Washington	52.50	45.00
Cook	7,545.00	8,862.00	Wayne	17.50	72.00
De Kalb	80.00	70.50	White	45.00	48.00
De Witt	32.50	.....	Whiteside	95.00	2.50
Douglas	58.00	.....	Will	127.50	.....
Du Page	20.00	.....	Williamson	20.00	99.00
Edgar	62.50	56.50	Winnebago	205.00	234.50
Edwards	21.00	17.50	Woodford	51.25	.....
Effingham	55.00	63.00	Subscriptions	25.00	27.00
Fayette	22.50	.....	Exhibits	545.00	150.00
Franklin	17.50	.....	Refunds from Polonie	60.75	.....
Fulton	222.50	40.00	do	1.00	.....
Gallatin	35.00	52.00	Returned to Winnebago	20.00	.....
Green	72.50	.....		
Grundy	38.50	.....		\$15,856.34	\$14,177.00
Hamilton	22.50	.....		
Hancock	46.00	30.00	Total		\$30,033.34
Hardin	7.50	6.00	Sent to Treasurer, \$29,632.84		
Henderson	30.00	24.00	Balance May 1st, \$200.50		
Henry	105.00	110.50			
Iroquois-Ford	118.50	108.00			
Jackson	71.00	92.00			
Jasper	25.00	24.00			
Jefferson	55.00	64.50			
Jersey	.....	51.50			
Jo Davies	47.50	.....		
Johnson	27.50	36.00			
Kane	277.50	.....		
Kankakee	110.00	134.50			
Kendall	5.00	.....		
Knox	80.00	.....		
Lake	52.50	12.50			
La Salle	208.50	162.50			
Lawrence	55.00	32.00			
Lee	37.50	8.00			
Livingston	90.00	48.50			
Logan	85.83	19.50			
Macon	95.00	55.00			
Macoupin	112.50	.....		
Madison	220.00	291.00			
Marion	110.00	.....		
Marshall-Putnam	47.50	29.00			
Massac	32.50	36.00			
Mason	47.50	.....		
McDonough	82.50	86.50			
McLean	192.50	156.50			
McHenry	77.50	60.00			
Menard	22.50	.....		
Mercer	60.00	.....		
Monroe	30.00	6.00			
Montgomery	122.50	132.00			
Morgan	137.50	.....		
Moultrie	.....	11.00			
Ogle	101.00	.....		
Peoria	381.25	267.50			
Perry	40.00	56.00			
Piatt	27.50	.....		
Pike	92.05	36.50			
Pope	5.00	14.00			
Pulaski	27.50	.....		
Randolph	58.25	60.00			
Richland	15.00	38.00			
Rock Island	172.50	186.00			
Saline	78.50	.....		
Sangamon	312.50	252.00			
Schuyler	15.00	28.50			
Scott	25.00	.....		
Shelby	32.50	48.00			
Stark	22.50	21.00			
St. Clair	298.50	324.00			
Stephenson	121.00	135.00			
Tazewell	51.50	88.50			
Union	50.00	68.00			
Vermillion	272.50	129.00			
Wabash	42.50	.....		
Warren	51.00	45.00			

Collections for 1918 show an increase of \$1,044.79 and for the first four months of 1919 an increase of \$4,524.45. Part of the increase for this year is due to extra 50 cents in the per capita tax, this amount being set aside to create a legislative fund. With this fund deducted the margin is a fair one over last year.

During the fiscal year of 1918, 132 checks were drawn for \$21,529.74. Of this sum \$6,678.79 was for medical defense and \$14,850.95 for general expenses and the JOURNAL. For the first four months of the current year 54 voucher checks were drawn for \$9,822.53. Of this amount \$1,621.25 was for medical defense, \$320.00 for legislative work and \$7,881.28 for general expenses and the JOURNAL, making a total expenditure of \$31,352.27. This shows an overdraft of \$1,318.93, which has almost been covered by the collections of the first 15 days in May. During the summer and fall months of 1918 society work was at a standstill. With so many going into the service and the "flu" epidemic coming on so soon after, no one had time for organization work. Since February of this year most societies have taken on new life and things look brighter for 1919. Many of the component societies have paid dues for their members who were in service and it is hoped more will do so. Most of the men went away with the idea that they would not have to pay while away and do not like the fact that they have been dropped. The men who had not paid for 1917 were carried until January of this year, with the hope that the local societies would remit for them.

During the past year we have added 869 new names, 69 reinstatements. Have lost through lapses 536, by death 32, an increase in membership of 370. The total membership is 6,733.

Your secretary having been called into active service immediately after the 1918 meeting the work of his office has been carried on by the assistant secretary, whose privilege and pleasure it has been to serve you.

Respectfully submitted,

BEATRICE H. GILMORE,

Assistant Secretary.

DR. G. G. BURDICK (Cook): I move that the report be accepted. (Seconded and carried.)

The report of the Chairman of the Council was read by Dr. C. D. Pence.

REPORT OF THE COUNCIL

Mr. President, Delegates assembled, Ladies and Gentlemen:

As chairman of the Council of the State Society I read to you for your consideration the annual report of the Council.

At the meeting immediately following the adjournment of the last House of Delegates the Council organized and elected Dr. C. D. Pence as chairman. The Council met again at the regularly stated time, June 12, 1919, in Chicago. The chairman appointed Drs. C. S. Nelson, C. E. Price and C. W. Lillie, members of the Finance Committee; Drs. T. W. Gillespie, C. W. Lillie, C. D. Pence, members of the Advertising Committee. On motion, regularly made and seconded, Mrs. B. H. Gilmore was authorized to act as assistant secretary, and during the absence of Dr. W. H. Gilmore to sign checks for vouchers certified by the Council. The treasurer was also formally directed to pay checks so signed.

If we take into consideration the instability of the times, we think the society has done well during the year. A year ago it was conjecture if we would be able to continue active operations as a society and not curtail our activities. Instead of curtailing activities we have increased them.

Soon after the annual meeting last year your secretary, Dr. W. H. Gilmore, as a member of the Medical Reserve Corps, was called into active service of the government. He had been in government service at home for the year previous, but at this time was detailed to Camp Oglethorpe and from there to service in France. The duties of that office have since fallen upon Mrs. Gilmore, who has carried forward the work of that office in a most satisfactory manner in every respect.

The Journal—Along with the high cost of living, labor and all commodities comes a higher cost of producing a medical journal. With a state medical journal, run as ours is run, exists an anomalous situation. There is really no income from subscriptions. If our mailing list is increased a few hundred it increases the cost of the JOURNAL very materially and does not show an increase of income.

As has been stated in previous reports, the income from the JOURNAL is from advertising. During the war period the securing of advertising has been most difficult, owing to shortage of various sorts of merchandise, and the uncertainty of business conditions. During the war period prices of paper, inks and labor have advanced at an enormous rate. The labor situation as it applies to publishing houses is growing more serious and prices are still advancing on labor. The price of paper has fallen but slightly.

During this period several state and independent medical publications have suspended, as well as many trade publications. A constantly growing popularity of the ILLINOIS MEDICAL JOURNAL has saved us from

that fate, and our income from advertising shows an increase of \$1,538 more than last year. While this is flattering, the increased income does not more than keep pace with the increased cost of production.

Cost of the Journal—The cost of producing each number of the JOURNAL for the year is as follows:

PRINTING

June, 1918	\$ 611.46
July, 1918	728.94
August, 1918	651.65
September, 1918	734.00
October, 1918	658.32
November, 1918	736.19
December, 1918	743.79
January, 1919	767.98
February, 1919	773.45
March, 1919	749.34
April, 1919	734.08
May, 1919	820.72

Total for twelve issues.....	\$ 8,709.92
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To this we add:

Editor's salary	\$ 900.00
Managing editor's salary.....	720.00
Commissions on advertising.....	730.13
Subscriptions	12.00
Stationery	29.57
Postage, approximately	940.00
One-half stenographer's salary...	325.00

3,656.70

Total cost of JOURNAL.....	\$12,366.62
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INCOME FROM JOURNAL

Total receipts from advertising..	\$10,497.92
Less exchange	8.86

Net	10,489.06
Balance in bank from last year...	18.26
Interest	2.60

\$10,509.92

Transferred to Treasurer Markley, \$9,700.00. This is \$1,100.00 more than was transferred to the treasurer last year.

Total cost of JOURNAL.....	\$12,366.62
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Income from JOURNAL.....	10,509.92
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Excess of cost of production over income...	\$ 1,856.70
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This indicates a cost to the society of 2.11 cents per copy for the JOURNAL. In this report we are taking no account of uncollected accounts, as they are practically the running monthly accounts and are approximately the same each year. Neither are we taking into account the income from our outside subscriptions. This amount, which is relatively small, goes directly to the secretary's office, and at this time I have no data of the exact amount. It should be added to the income of the JOURNAL.

Report of Committees.—The work of the Medico-Legal Committee has been lighter during the year, due

largely, no doubt, to war conditions. Possibly war away from home makes less war at home.

Membership.—One year ago we were uncertain and much concerned about what the numerical strength of the society would be at this date. Fortunately there have not been many names taken from our lists—a few here and there, but again a few added, so that the membership remains about the same as last year, with a net increase of 370.

Legislative Committee.—Never in the history of the society has more work been required to prevent many vicious or obnoxious measures from being presented to or enacted by a legislature. The Legislative Committee has been required to be constantly alert during the present session. Several members of the society have been required to educate their representatives in the general assembly.

We wish especially to speak of the work done by Drs. W. L. Noble, M. L. Harris, C. E. Humiston and E. L. Olsen. Each of these gentlemen has made several trips and spent many days in Springfield, opposing vicious legislation, or trying to promote some worthy amendment. This required these doctors to leave their business and give up their valuable time for the interests of the society.

The Council, at its regular meeting in April, met in Springfield for the purpose of representing the society relative to obnoxious measures. At this time the Council organized itself as a committee to assist in defeating some of these measures, including the proposed annual registration measure, the osteopathic and chiropractic bills, by arranging to have medical men from various parts of the state appear and oppose these measures before the legislative committees.

It is unfortunate that at the present time the Department of Registration and Education is not arrayed in support of the interests of the medical profession. Neither the director nor the assistant director of this department have been as active in opposing vicious legislation as they should have been. The language of many of these bills indicates plainly the accomplishment of these gentlemen, and the bills without exception are so worded as to have the "fees inure" to that office.

In this place it is meet to speak of the action of the House of Delegates in session at the last annual meeting. It will be remembered that Mr. Shepardon, director of the Department of Registration and Education, appeared before the delegates, and, in flowery, hypnotic language induced the delegates to vote approbation of his annual registration plan, and at that time stated plainly it was the fees from such registration he desired. Drs. C. E. Humiston and C. C. O'Byrne, as delegates, opposed the measure and Dr. O'Byrne tried to present a motion, asking for more time in which to consider this plan of registration. Dr. O'Byrne's motion did not prevail, and the delegates, with only a few minutes consideration voted to favor such an enactment.

It was soon learned that the profession at large

did not favor the idea of being classed with tradesmen, annually registered and penalized by Mr. Shepardon or Mr. Dodds, and at its January meeting the Council went on record as opposed to the proposed annual registration measure, and prepared to fight the measure if proposed to the Legislature for enactment. Similar action was taken by the Council of the Chicago Medical Society, and in a short time nearly every physician in the state was opposing the measure as written and presented by Mr. Dodds. At this time we know of but three physicians in the state who favor annual registration. The activities of the various county societies sounded the death knell of this proposed measure and show conclusively the value and power of a concerted action of the State Society. The action of the House of Delegates last year in approving such a measure without consideration shows conclusively the inadvisability of this body in taking undeliberate action on any question of such magnitude.

We wish to speak here of the legislative fund. At last year's session the annual dues were increased fifty cents per member. There has been a slight misunderstanding, at least in one instance, as to why the dues were raised and the purpose. This increase of dues is to go to a special fund known as the legislative fund, and is to be expended for no other purpose than favoring the interests of the profession in legislative matters. The treasurer keeps this as a separate and specific fund. We think this fund is ample for the purpose, and we also think that the Society should in the future employ a capable representative to be in Springfield during legislative sessions for the express purpose of promoting the interests of the profession.

This recalls to us the fact that the Osteopathic Association assesses its members \$30.00 annually, making a fund of \$60.00 per member for each legislative session, for use in promoting osteopathic legislation. Such a fund as this would eventually accumulate, we believe, is wrong, and on its face shows *intrigue*, but we do believe that our association must be prepared to do more in the future toward looking after the interests of the profession in legislative matters.

Free Medicine.—The Council, during the year, has taken note of the continued and increasing activities of free medical organizations, particularly of the continued efforts of the State Department of Health to bring about Free State Medicine. The organizing of free venereal clinics and the giving of free Wassermanns are the last efforts of consequence in this direction.

In November, 1918, \$61,307.51 became available from the Federal Government for free treatment of venereal disease. During the second year, in order to secure this fund from the government the state must appropriate an equal amount. This creates a fund of \$122,600.00 for free venereal service. As this work is not done by the profession at large, it simply relieves the doctors of an immense amount of legitimate business. Of course the amount named does not indicate the actual amount of business, as this is free work done by underpaid men in the dispensaries and labora-

tories. Our members who have equipped laboratories at a large expense for the service of the profession also lose this business. And why should the state practice medicine and treat free of all charge venereal disease?

Free venereal clinics are but one feature of Free State Medicine as it is being practiced in Illinois. Some complaint has also come from the habit of the Health Department flooding the people with free pamphlets relative to medical subjects. Such measures are unethical if sent to the laity by private physicians. The subject is a large one with many angles. If the function of the Health Department is to practice free medicine and to conduct a sort of medical academy for the public, then the department is clearly within its field. If its function is to practice preventive medicine and only to safeguard the health of the community, then we believe the department is exceeding its function and should be regulated. We feel that medical literature and promotion of preventive medicine should reach the public through the local medical societies. We recommend that the House of Delegates take some action relative to this matter.

DR. J. H. RICE (Adams): I move that the report be received and placed on file. (Seconded and carried.)

The report of the treasurer was read by Dr. A. J. Markley.

TREASURER'S REPORT

June 1, 1918, to May 19, 1919

June 1, 1918, balance on hand.....	\$ 4,868.07	
Received of W. H. Gilmore...\$10,873.79		
ILLINOIS MEDICAL JOURNAL....	9,700.00	20,573.79
Total	\$25,441.86	
Vouchers cashed	16,094.80	
Balance on hand.....	\$ 9,347.06	
MEDICO-LEGAL DEFENSE FUND		
June 1, 1918, balance on hand.....	\$13,420.85	
Received of W. H. Gilmore....\$ 7,032.00		
Interest	175.00	7,207.00
	\$20,627.85	
Vouchers cashed	5,844.19	
Balance	\$14,783.66	
Less bonds	5,000.00	
	\$ 9,783.66	

LEGISLATIVE FUND

June 1, 1918, balance on hand.....	\$ 2.50	
Received of W. H. Gilmore.....	2,252.00	
	\$ 2,254.50	
Vouchers cashed	320.09	
Balance on hand.....	\$ 1,934.41	

DR. C. J. WHALEN (Cook): I move that the

report be received and placed on file. (Seconded and carried.)

At this point the Committee appointed by the Chairman to present a resolution in reference to the Osteopathic Bill returned, and Dr. N. M. Eberhart, Chairman of the Committee, read the following:

"WHEREAS, the Governor and Legislature of the State of Illinois have given in the present Medical Practice Act one of the best laws to be found in any state in the Union, and

"WHEREAS, Senate Bill No. 360 would lower the standard and permit limited practitioners to practice medicine and surgery in all their branches with qualifications lower than those provided in the present law, therefore be it

Resolved, that the Illinois State Medical Society, represented by its House of Delegates, opposes the passage of this or any other bill which would lower the standard of requirements for the practice of medicine."

I offer the resolution, move its adoption, and that the Chairman of the Legislation Committee be instructed to send telegrams to suitable members of the Senate.

The motion was seconded and carried, with an amendment offered by Dr. C. D. Pence to the effect that a copy of the Resolution be sent to the Governor also.

DR. C. J. WHALEN (Cook): Inasmuch as we have with us to-night a man who has devoted a great deal of time in Springfield to the question of medical legislation, I ask that we suspend the rules and invite Dr. M. L. Harris, who has just come into the room, to say something about the situation down there from his personal experience. (Seconded and carried.)

DR. M. L. HARRIS: As you know, there have been a great many bills before the legislature this year, perhaps more affecting the welfare of the people in the medical line than at any previous year, at least any previous year that I know of.

I want to say a very good word for the members of the present legislature. I think we have a most excellent Senate and House, and I think that they are awake to the interests of the people along medical lines and are doing everything that they can to prevent any legislation being passed which will affect adversely the welfare and the health of the people. I think they only

need to be shown and you will find they are always with us. They have done some most excellent work in killing some bills that have been up and in passing other bills amended so as to meet the situation as it now presents itself.

For instance, the Nursing Bill, which started out as one of the most pernicious pieces of legislation ever offered, has been completely defeated, and the bill has been passed by the Senate which offers relief to the situation and which has had removed from it every pernicious feature that was in the old bill. That, I think, the Senate is to be congratulated upon, and should receive the thanks not only of the profession, but the people for the excellent manner in which this has been handled by them.

Several other bills with which you are probably familiar have been killed in committee, have never been able to come to the floor for discussion. For instance, today one of our members appeared before the Committee on the bill which has just been mentioned and presented some arguments to the Committee against that bill. I feel that that bill will not get out of the Committee. It is certainly an intelligent Committee that is earnestly trying to get the real facts of the case, and I feel sure from the attention which the gentleman received who discussed this measure in behalf of the profession today that this bill will be killed in committee.

I think that we should not condemn the Legislature or the members of the Legislature. I think that they are doing mighty well, and they ought to be commended for the excellent way in which they have handled many of these pernicious bills. You understand that the members of the Legislature, both in the Senate and the House, are laymen, and it is very difficult to get them always to see matters of this kind as we see them from a professional standpoint, but if you have the patience to instruct them and present the facts to them, I have found them ready to vote for that which will bring the best results for the welfare of the people. I think both houses are to be congratulated, and we are to be congratulated on having such good legislators as we have today, and they ought to be commended for the excellent work that they have done. (Applause.)

Dr. C. W. Lillie, of East St. Louis, moved that the remarks of Dr. Harris bearing upon the question of the legislature and its activities

be given to the public press at once, that the whole State may know how the medical profession stands upon these questions. (Seconded and carried.)

PRESIDENT FIEGENBAUM: We will hear the report of the First Councilor District.

COUNCILOR REPORT, FIRST DISTRICT

DR. C. E. CRAWFORD (Rockford): The activities of the First District have not been very great, owing to the number of our boys that were in the service, and then the influenza epidemic through the fall and winter for several months, making the attendance of our meetings very small.

Beginning with this year, the attendance in the local societies has been good. We have had no disputes, no difficulties to handle in the district. I am very glad to report that every County in the First District went over the top in opposition to the Registration Bill when they were asked to do so.

PRESIDENT FIEGENBAUM: We will hear the report of the Councilor of the Second District.

COUNCILOR REPORT, SECOND DISTRICT

DR. E. S. GILLESPIE (Wenona): I think this is the first time since I have been connected with the Illinois State Medical Society that I have had to give you an apology as a report. I just came from the West about two days ago, and what has happened in the Second District I learned here tonight from the Secretary's report.

I am very glad to see that so many new men are becoming interested in the work of the Illinois State Medical Society. My very good friend, Dr. Coolley, was very doubtful whether we would hold together for the period of the war. Fortunately, the war didn't last long, and the men are getting back, and I am sure that the Illinois State Medical Society is doing better work than it did at that particular time, and I am certain, too, that the Legislative Committee have increased in their speed and are going on "high." Thank you. (Applause.)

The report of the Third Councilor District was read by Dr. C. D. Pence, of Chicago:

COUNCILOR REPORT, THIRD DISTRICT

Cook county society, with its component branch societies, has remained in a fairly normal state. Its activities have not lessened and its membership has increased about 250 since last year.

Lake county maintains a membership of 43, a loss

of 4 members, with 13 physicians in the county not members. My report shows 21 physicians are or have been in the government service during the year.

Kankakee County Medical Society reports 44 members, with 15 physicians in the county not members. This shows an increase of 1 member for the year. I have no record of those in the government service.

Will County Medical Society reports 51 members in good standing and 37 physicians in the county who are not members. This, of course, is entirely too many non-members. We shall try during the next year to reach some of these non-members.

DuPage County Medical Society, you will remember, received a charter last year. The society had not been completely organized when many men in the county went into the government service, so that there has been no attempt to carry on the society work and the members in that county have continued to carry their membership in Cook county.

Report of the Fourth Councilor District was read by Dr. F. W. Gillespie, of Peoria.

COUNCILOR REPORT, FOURTH DISTRICT

Mr. President and Gentlemen of the House of Delegates of the Medical Society of Illinois: In making this, my first report, I wish to state that my District (the 4th) is in a good healthy condition.

The past year has been a trying time for County Medical Societies. A great number of doctors were called to the service with the uncertainty of the time of their being called; then the short time given to report after receiving the orders resulted in many presidents and secretaries leaving without having the vacancies filled either by election or appointment of a substitute. However, this district has gotten under way during the past three months and all have organizations either newly elected or appointed, and each county has had a meeting this spring except Henderson county. I was unable to hear from Henderson county.

I attended a live meeting of the Henry County Medical Society at Kewanee, Illinois, May 1, and an equally live and interesting one May 6, of the Fulton County Medical Society. May 9 it was my privilege to be present at the Warren County Medical Society meeting at Monmouth, Illinois. This meeting was the first for that county in 1919, and was well attended. On May 13 I had made arrangements to attend the meeting of the Rock Island Medical Society, but the Peoria County Legislative Committee, with which I have met many times, needed me to fill out a delegation going to Springfield to assist in passing Senate Bill No. 116 with Buck's amendment, so I accompanied this delegation. I assisted as much as possible in the work of the Peoria County Legislative Committee. Peoria County has rendered good service in fighting the extraordinary batch of vicious legislation we have had this winter.

I wish now to thank the members that have rendered this service, and especially do I thank the Legislative Committee.

I have attended all the councilors' meetings, and during the past year at these meetings many important subjects have been discussed, but the one subject that has been ever with us was the legislative measures that affected the medical profession.

In our January meeting the council passed certain resolutions relative to the annual registration of physicians that spread the campaign against the measure broadcast over the state, which had already been started in certain sections. The rapid growth of this sentiment and its effectiveness when started lead me to remind this house of delegates, of the great importance of giving or withholding its approval to any measure, and suggest extreme caution.

Our meeting at Springfield discovered a great mass of vicious legislation threatening us. Each councilor was called upon to send speakers to meet the legislative committee at the hearings. This was a kind of rescue call, if you please. The men from my district responded very nicely, but the general lack of interest of medical men in these subjects is appalling, and I wish, gentlemen, to make a plea for more active co-operation of the individual medical man toward these subjects.

It is necessary for a man to be posted in order to do effective work, and it is the duty of every man to keep himself posted on these subjects.

Report of the Fifth Councilor District was read by Dr. C. S. Nelson, of Springfield:

COUNCILOR REPORT, FIFTH DISTRICT

Mr. President and Gentlemen of the House of Delegates: Am sorry I am not able to make a more complete report, but the Fifth District is no exception to what I presume is the general rule, and some counties at least have been in a more or less chaotic condition owing to the war, "flu" epidemic, etc., so it has been impossible to obtain a complete report. The secretary of the De Witt County Medical Society was suddenly called to war and his successor was unable to procure his records, consequently I could get no accurate information from DeWitt county.

There are nine counties in the Fifth District, and I have received reports from seven of them, showing the society in the Fifth District to be in a very healthy condition, considering the abnormal times. These counties report an aggregate of 313 members, 17 lapses, fifteen new members and nine deaths. There are about 40 members still in the U. S. service. Judging the condition of the other two counties from last year's report, I can say that the society of the Fifth District is in a very healthy condition.

Your councilor has endeavored at all times to exercise his influence to the best of his ability toward the upbuilding of the society. I have attended every meeting of the council and responded

to an invitation to visit and address the Tazewell County Society on April 8. Have also visited several other counties in the district during the past year.

Respectfully submitted,
C. S. NELSON,
Councilor, Fifth District.

Report of the Sixth Councilor District was read by Dr. H. P. Beirne, of Quincy:

COUNCILOR REPORT, SIXTH DISTRICT

The Sixth Councilor District composes the counties of Adams, Pike, Brown, Scott, Madison, Macoupin, Jersey, Greene, Morgan, Cass and Calhoun. Meetings attended, 5. Societies in district, 9. Joint society meetings, 1.

The medical profession throughout this district has responded readily to the Councilor's request for co-operation in killing vicious legislation.

All of the societies are live, wide-awake organizations. In my district joint county meetings, say once a year, have been worked out for the social and professional advantage of the members, men of importance gracing the occasions by their presence. Many of the members of the component societies are returning from the service better equipped for scientific medicine and filled with the esprit de corps for medical affairs.

Respectfully submitted,
H. P. BEIRNE.

PRESIDENT FIEGENBAUM: We will hear the report of the Seventh Councilor District.

COUNCILOR REPORT, SEVENTH DISTRICT

DR. C. F. BURKHARDT (Effingham): As Councilor of the Seventh District, I haven't very much of a report to make for the reason that I was discharged from the army recently, and since that time I have had little time to do much work in the way of starting my duties as Councilor. I have had the very good fortune, however, of having a very good alternate, Dr. Murfin, and I think really Dr. Murfin took care of the business much better than I could.

Owing to the great number of physicians who volunteered for service in the army, it has had a tendency to cause Society work to somewhat drag, but figures on an average, I believe, show the Seventh District is in pretty fair shape.

We have two counties that are somewhat weak, but they have always been weak. I don't know that they are weaker or any less active than they have been in former years.

I beg the pardon of the Chairman and the House of Delegates for being somewhat late, but I have been trying to do my little bit over in Springfield in regard to legislative work. I

don't know whether it will bring forth good fruit or not, but we hope it will. We are doing our best, anyway, on it. I refer to the Osteopathic Bill, or a bill that has been brought forward to modify the present Medical Practice Act.

I have visited something like three societies, Mr. President, since my return, and the principal object of my visit was to encourage opposition to some of the vicious legislation that has come up, and, through the efficient efforts of Dr. Deal, with the cooperation of the other members, we have succeeded at least in practically killing the Annual Registration Bill. I don't believe that they are going to be able to introduce that. I am unable to say tonight what the attitude of the Committee will be in regard to Senate Bill No. 360, but I am hoping that the Committee will fail to report it out.

The Councilor of the Eighth District was not present. His report follows:

COUNCILOR REPORT, EIGHTH DISTRICT

As Councilor of the Eighth District will say in my report that, as far as I have been able to learn, the county societies in the Eighth District are not showing as much interest and not as well attended as they were in the pre-war days. This, I think, is explained by the fact that these counties have a goodly number of men in the service and those left at home have been exceptionally busy, especially through the influenza epidemic, and could not attend medical societies.

It has always been thought, and truly too, that the busy doctor was the one who always attended medical societies, but the last year has made a change in this as well as many other things in the life of the doctor.

Lawrence, Jasper and, as far as I have been able to learn from Cumberland, have had no society meetings at all during the year. These conditions we hope to overcome when the men get home from the service and things get back to their normal state.

The presidents of the State Society for the last three years have not made so much of a canvas of the state as presidents of former years, due to various conditions, but when the men get home from the army and the county societies do not pick up and take on new life as they should, I think it would be well for the incoming president to make a canvass of the weaker counties and inject into them a new life.

A few years ago there was made a ruling in the council that councilors would visit counties in their district only upon invitation. I believe that if the county societies do not get into working order soon, the councilors, with the president if deemed necessary, should go into such counties and lend them all the help possible.

The more I learn of medical legislation the more I become convinced that it is asking too much of our medical legislative committee to take care of and do all that the profession expects and demands of them. Legislators seem to have the faculty of changing their minds quite often. So by the time our committee is able to get its forces collected for a certain date, the legislative committee have changed the time for hearing or debate.

It seems to me the only sure way for the profession to be always ready is to put some man in Springfield with nothing else to do but to keep the legislators informed of the wants and needs of the professions, who can work with and under directions of the legislative committee. This does not need to be a physician, but a man who knows the medical profession, its wishes and needs.

The attorney for the society knows better than any one else, outside of the profession, what our stand on legislative matters is, and he knows how to argue his cause.

The following members from the Eighth District have passed away during the last year:

R. B. Patterson, of Palestine, following an operation for appendicitis.

R. H. Bradley, of Marshall, found dead in his office, supposedly died from heart disease.

E. J. Miller, of Urbana, died from influenza.

L. C. Miller, of Champaign, from influenza-pneumonia, died within a month following his brother, E. J. Miller.

A. M. Cochran, Danville, from pneumonia, at one time in charge of the Soldiers' Home at Danville.

W. R. Tennery, Danville, from pulmonary emboli, following an operation.

W. N. Redmond, Danville, from pneumonia.

Your Councilor from the Eighth District wishes to state that he has attended all Councilor meetings and has done whatever other things in his district seemed advisable, but he is also sure that the organizations in the district are not as good as they were a year ago.

Respectfully submitted,

C. E. PRICE,

Councilor, Eighth District.

The report of the Ninth District was read by Dr. C. W. Lillie, of East St. Louis:

COUNCILOR REPORT, NINTH DISTRICT

Complete reports from eighteen of the twenty-three counties in the Ninth District show a membership of 420, and a resident non-membership of 211, practically one-third of the physicians in the district being out of the organized profession.

Only one county, Gallatin, reports a 100 per cent membership, all the doctors in the county being members of the County Society.

Franklin county has the smallest percentage of members of any county, there being only 12 members and 39 resident physicians who are not affiliated with the Society.

The work of the Councilor for the past year has

been, for the greater part, clerical. Many letters have been written, and generally with ready responses from Secretaries. There have been a few instances where repeated appeals for information have been fruitless. The "Plea for Greater Efficiency in County Society Officers," in the Secretary's Conference, is due to this one fact.

A notable example of "efficiency" is found in the work of Dr. J. G. Parmley, of Williamson county. In this county both the President and Secretary were in service, and the Society had died from "inanition." Through the efforts of Dr. Parmley a meeting of the physicians of the county was called for March 13, and your President, Dr. E. W. Fiegenbaum, and the Councilor visited the county and during the day had the pleasure of seeing an organization effected with twenty members. This was later increased to thirty.

I have every confidence that upon the return of the medical officers from service there will be a ready increase in the activities of society work in the district, and that a majority of those eligibles not now members will join the county societies.

Respectfully submitted,

C. W. LILLIE,

Councilor, Ninth District.

Dr. Don Deal, of Springfield, read the report of the Committee on Medical Legislation:

REPORT OF COMMITTEE ON MEDICAL LEGISLATION

Your committee on Medical Legislation beg to make the following report: The work this year has been unusually active. We feel that the committee suggestion of assessing each member 50 cents has been responsible for many of our added efforts, because we knew that there would be no question as to the securing of necessary funds. In spite of this fact, however, the committee will have spent very little more money than was used last year. We now feel that the expenditures will be below \$1,000 for the two years' session. However, it may be necessary to spend some money during the off year on account of our Medical Practice Act being attacked, as to its constitutionality, in the courts. We feel that it may be advisable to employ counsel in order that the records may be kept clean for the Supreme Court.

Two years ago the committee were successful in putting through the present Medical Practice Act against the strongest opposition which could be mustered. This session we feel that we have successfully defeated all vicious bills.

The chief reason for this success has been due to the fact that the committee were able to organize the medical men in the state and that these men were not afraid to use every effort in working for the interests of the profession. I wish it were possible to name individuals who have been most active and to enumerate particular societies that were most helpful. These few men and a few societies stand out

prominently in contrast to the great majority of men and societies who were entirely inert.

The committee have personally, with practically no help, scanned the bulletin each day and have read thoroughly every bill which might in any way affect the profession.

The committee sent out about fourteen thousand circular letters and several hundred personal letters.

Thirty-seven bills were carefully watched during their progress in order to learn if amendments might be attached which would affect the profession. Nineteen hearings were held.

Many tricks have been learned in this work and many pitfalls are avoided. The more I see of legislative work the more I feel that it is a question of having a good, live member of the committee in Springfield who will see to it that interest is aroused throughout the state. This must be followed by activities among the men in the district in which legislators live.

The following are a list of the bills which have been followed and upon which hearings have been heard, together with their disposition and present situation:

SENATE BILLS

- S. 33—Dailey. Optometry (H. 80.) A law.
- S. 82—Glackin. Maternity Fund. Community Welfare.
- S. 116—Hull. Nurse Bill. *Doctors' amendments accepted*. Third reading.
- S. 123—Glackin. Nurse Bill. To amend code. Killed.
- S. 124—Glackin. Physicians' Nurse Bill. (See S. 116.)
- S. 223—Wheeler. Hours work, druggist employees. Public Health.
- S. 226—Kessinger. Surgical institute for children. Third reading.
- S. 296—Glackin. Maternity Fund. Community Welfare. *Revenue*.
- S. 302—Barr. Tax medicine vendors, itinerant. Second reading.
- S. 303—Barr. Women eight-hour law. Several amendments. Hospitals excepted. Third reading. To be revised.
- S. 360—Dailey. Osteopath. License and miscellaneous hearing Tuesday, May 20.
- S. 463—Lantz. Hours of labor, females. Second reading.
- S. 464—Sadler. Advertising abortive drugs, etc. (See bill.) Criminal procedure.
- S. 476—Broderick. Chiropractor. *Judiciary*.
- #### HOUSE BILLS
- H. 57—Smith, O. W. Women Dental Hygienists. (New H. 230.) Tabled.
- H. 64—Thon. Eugenic Marriage. License. Judiciary Committee hearing May 21.
- H. 74—Hicks. Hours of labor for women. Industrial affairs.
- H. 80—Roderick. Optometry. A law.
- H. 151—Igoe. Nursing Board. (See S. 123.)

Killed, S. 123.

H. 174—Smejkal. Practice of nursing. (See S. 116.) *Judiciary*.

H. 175—Smejkal. Nursing Board. (See S. 123.) *Judiciary*.

H. 177—Brinkman. College standards. Education. Dead.

H. 230—Smith, O. W. See H. 57. Dental Hygienists. Dead.

H. 232—Stubbles. Chiropractor. Dead.

H. 269—Stubbles. Against discriminating hospitals. *Third reading*.

H. 305—Vice. Permits nurses to clean teeth. *Doctor cannot cut jaw*. *Judiciary*.

H. 310—Brinkman. Chicago Hospital College of Medicine. Second reading. *Dead*.

H. 313—Douglas. Regulates college advertising. Third reading. *O. K.*

H. 411—Dietrich. Itinerant vendors taxed. *Judiciary*.

H. 484—Lyon. To validate applicants. (See Brinkman Bill.) Third reading. *O. K.*

H. 504—Stubbles. Chiropractors. Killed.

H. 535—Roderick. Osteopath. (See S. 360.) *Judiciary*.

H. 541—Jones. Repeals state dental examination fee. *Judiciary*.

H. 549—Shearer. College Bill. Third reading. *O. K.*

H. 555—Young. Dental Hygiene. First reading.

H. 556—Bippus (Brinkman). See H. 177 and H. 310. Educational Committee hearing Tuesday, May 20, *p. m.*

H. 639—Tice. Board of Health. (See Bill.) (By request.) *Judiciary*.

The report of the Committee on Public Policy was presented by Dr. Sadie Bay Adair, of Chicago:

REPORT OF THE CHAIRMAN OF THE PUBLIC POLICY COMMITTEE

Ladies and Gentlemen, Members of House of Delegates:

It has been my hope and earnest endeavor that this year's Health Sunday observance should surpass our former meetings, and early in the year, March 1, 2 and 3, I visited Peoria to make initial arrangements.

Dr. Collins, our chairman of the Committee on Arrangements, made it possible for me to meet with the Ministerial Association on the following Monday morning, when I learned that the Anti-Saloon League had all the churches engaged for the morning of May 18 a year in advance for their annual meeting.

This necessitated a distinct change in our plans, and we had to abandon the idea of holding morning lectures, as had been our custom. So, after a meeting with Dr. Collins' committee, we decided the next best thing to do was to have the best mass meeting possible to arrange, with a few evening meetings in available churches, and concentrate all our efforts upon making these few gatherings a success.

For the mass meeting we engaged the Coliseum, the largest available hall in Peoria, and then looked about for the speaker for this occasion. I tried to induce Surgeon-General Rupert Blue of the Public Health Service at Washington, D. C., to lecture, but owing to pressing duties, he was obliged to decline, but kindly arranged for one of his best speakers to represent him. So it is through him that we were able to secure Major L. P. H. Bahrenburg of St. Louis, who is connected with the department at Washington.

For the evening lectures the following consented to appear: Dr. E. W. Fiegenbaum, president of the Illinois State Medical Society; Capt. James Warren Van Derslice, its president-elect, and Dr. John Dill Robertson, health commissioner of Chicago.

In closing I wish to say that I met with the heartiest co-operation on the part of the ministers and physicians of Peoria in making my arrangements for Health Sunday, both for the use of the churches and for the musical program, and special thanks are due to Dr. Collins and Rev. J. C. Hazen, president of the Ministerial Association, for the help they gave us throughout. The newspapers of Peoria also kindly assisted by giving the meetings publicity.

Respectfully submitted,

SADIE BAY ADAIR, M. D.,

Chairman, Public Policy Committee, Illinois State Medical Society.

PRESIDENT FIEGENBAUM: We will listen to the report of the Medico-Legal Committee. (Applause.)

REPORT OF MEDICO-LEGAL COMMITTEE

DR. C. B. KING (Chicago): I haven't any apology to offer for the short report I am going to give you. When I went into the service last October, our good friend, Dr. D. R. MacMartin, was made the alternate chairman of this committee. Dr. MacMartin, we all know, died recently, and I had to get together yesterday a summary of the work that had been done in the past year.

Practically all of this work in the last few months has devolved upon the attorney for the Society with comparatively little aid from the members of the Committee.

On May 15, 1918, there were pending sixty-three suits. Some of these suits had been filed in the year previous and some had been standing over from the year before that. Since May 15, 1918, there have been filed thirty-seven new suits. Since May 15, 1918, there have been permanently disposed of forty-two suits, leaving

a balance of fifty-seven remaining, or five less than there was one year ago, and five more cases were disposed of this past year than the previous year, so that the work that has been carried on is really greater than a year ago. The expense was a trifle over fifty per cent of the expenses one year ago.

The report of the Committee on Medical Education was called for, but no one was present to report for the Committee.

PRESIDENT FIEGENBAUM: The last standing committee is the Committee on Scientific Work, Dr. G. G. Burdick, of Chicago, Chairman.

REPORT OF COMMITTEE ON SCIENTIFIC WORK

DR. G. G. BURDICK (Chicago): I might state that this thing was wished on me last year. I did not even know there was a Public Health Section until I found out I was Secretary of it. We got quite a program together after it appeared that we were going to have a complete failure. I sent out a great many letters asking for papers for the Section and really didn't receive an answer up to a week before it was time. Then I got busy with Dr. Drake, and by means of the telegraph and telephone and one thing and another, we got together more papers than the Council thought it advisable to let us have. We were informed, as a matter of fact, that the Council had no intention of letting the tail wag the dog, so they deliberately appropriated part of our program and connected it with the Medical and Surgical Sections, but it leaves us a full day tomorrow which will be devoted to Public Health. Some of our very good papers will enliven the dull Medical and Surgical Section Thursday morning. (Laughter.)

Our program is printed, and I don't think it is necessary to take time to read it, but when we really found out that it was up to us, we got busy, we worked, and we had a lot of very good help from a number of gentlemen. I am under obligations to Dr. Whalen for telling me what not to put on it, and Dr. Drake and two or three others suggested a great many people that might be willing to go on. We have them, and we have a dandy good program, the best program that you have ever had in that Section.

PRESIDENT FIEGENBAUM: The Secretary will read a letter received from the New York State Medical Society.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK

COMMITTEE OF COMPULSORY HEALTH INSURANCE

New York, May 12, 1919.

Dr. W. H. Gilmore,

Secretary, Illinois State Medical Society.

My Dear Doctor—The House of Delegates of the Medical Society of the State of New York adopted the following resolution at its annual meeting at Syracuse on May 6, 1919:

"Resolved, That the delegates from this Society to the House of Delegates of the American Medical Association be and are hereby instructed to introduce a resolution against compulsory health insurance in the House of Delegates of the American Medical Association, and to support it in every way possible."

Do you think it advisable to have your Society adopt some similar resolution in order that the House of Delegates of the American Medical Association may not side-step this most important matter, as they did last year?

Very sincerely yours,

EDEN V. DELPHEY, M. D.

Dr. C. W. Lillie, of East St. Louis, moved that the matter be referred to the Committee on Resolutions with the approval of the House of Delegates. (Seconded and carried.)

DR. C. J. WHALEN (Cook): Our attention was called a few moments ago to the death of Dr. D. R. MacMartin, of Chicago, who served very faithfully on the Medico-Legal Committee. I think it is only appropriate that a committee be appointed to draw up suitable resolutions to present to the House of Delegates on Thursday morning. I make that as a motion. (Seconded and carried.)

A number of resolutions were then read to be presented to the Resolutions Committee.¹ One by Dr. H. P. Beirne, of Quincy, in reference to an increase in physicians' fees; another by Dr. Beirne regarding the use of the roentgenograph to the embarrassment of members of the profession; another by Dr. Beirne in reference to the present demand of itemized fees from physicians by indemnity companies.

PRESIDENT FIEGENBAUM: The Committee to draw up resolutions on the death of Dr. MacMartin will consist of Dr. C. B. King, Dr. Hugh MacKechnie and Dr. C. E. Humiston.

Dr. J. H. Walsh, of Chicago, presented a proposed amendment to the Constitution.

PROPOSED AMENDMENT TO THE CONSTITUTION

Inasmuch as the third councilor district of the

Illinois State Medical Society contains slightly more than half of the total membership of the Society, and because of this fact the actual amount of work to be done in the third councilor district is out of all proportion to the other districts, and while it furnishes over half of the membership it has only one-eleventh of the representation on the Board of Directors. In order that councilor representation may be placed on a more equitable basis, I suggest that the third district be allowed *three* councilors, and in order to bring this about, I offer the following amendment to the constitution: That the word "nine" in Article VI, Sec. 1, third line, be changed to "eleven," and that when so amended Article VI, Sec. 1, shall read as follows:

Article VI, Sec. 1. The Board of Trustees, or, as in this constitution and by-laws designated, the Council, shall consist of *eleven* councilors, elected by the House of Delegates and the President and Secretary, ex-officio. Besides its duties mentioned in the by-laws, it shall have charge of and control of all the property of this Society of whatsoever nature and of all funds from whatsoever source.

PRESIDENT FIEGENBAUM: You have heard the reading of the proposed amendment to the constitution. Under the rules of the Society, it will lie over until the next meeting of the House of Delegates. Is there anything else to offer?

DR. T. D. DOAN (Macoupin): I am asking for information for the benefit of the Secretaries. As a result of our action last year, there was a raise of fifty cents in our dues. As I understand it, that will not be next year's dues. If I am incorrect, I wish to be informed.

PRESIDENT FIEGENBAUM: For the benefit of the gentleman from Macoupin, the Chair will say that he understands that the fifty cents have been added to the dues for 1919, and will so be collected every year until otherwise ordered by this House.

DR. C. J. WHALEN (Cook): I think there is a matter of a great deal of importance to take up before we adjourn, and that is the agitation that is going about at the present time for standardization of hospitals. It is a very important subject. The gentlemen who have had experience this past year with the dictatorial attitude of the Director of Registration and Education at Springfield will appreciate what you are up against unless you get busy. I am not the man to put this in the shape of a resolution; but I do believe that we ought to ask somebody that is familiar with the subject to talk on the subject of standardization of hospitals and

¹ Resolutions were published in the June Journal, pages 312-314.

the necessity of passing a resolution here next Thursday covering this subject. I would like to ask Dr. Humiston or somebody else to come forward and speak on it.

DR. C. E. HUMISTON (Cook): This is the time, I believe, Mr. Chairman, for the introduction of all resolutions. I would like to ask permission to introduce a resolution which will empower a committee of this Society to proceed with the matter of the standardization of hospitals from the standpoint of the medical profession of Illinois. I have not prepared such a resolution in words, but that is the substance of it. I did not know that it was necessary to make this in the form of a resolution or I would have prepared for it. There are many reasons why this Medical Society should deal with that subject. It is a subject which the doctors and the doctors alone know all about and are most concerned in, representing the public, and I think that this Society should go about the standardization of hospitals rather than leaving it to any special society or society of specialists, and we should cooperate with the American Medical Association, we being one of the units of that organization.

If it would be possible to present such resolutions to the Committee without having them formulated now, I would ask permission to do so, and to have them acted upon the same as if they were prepared now.

PRESIDENT FIEGENBAUM: Will you give him permission to prepare resolutions bearing on this subject and submit them to the Committee on Resolutions which will report to us on Thursday?

DR. C. F. BURKHARDT (Effingham): I make a motion that Dr. Humiston have such rights granted to him. (Seconded and carried.)

PRESIDENT FIEGENBAUM: Is there any other matter?

DR. T. D. DOAN (Macoupin): I would like to ask the indulgence of the House in a special privilege in presenting a resolution which I cannot give you at the present time, but I can give you the idea. The resolution, in substance, would be after this manner:

"WHEREAS, Mr. F. W. Shepardson and Mr. F. C. Dodds, of the Department of Registration and Education, have incurred the displeasure of the medical profession of Illinois, etc."—I would like to offer a resolution of some kind on

Thursday morning with regard to that, that the House of Delegates may go on record. May I say that I think they should use "elegant" language on Thursday morning as well. (Seconded.)

PRESIDENT FIEGENBAUM: Dr. Doan requests time to have a resolution prepared, as the Chairman understands it, condemning the Department of Registration and Education, and submit that resolution to the Committee on Resolutions to report to this House on Thursday. (Carried.)

DR. C. F. BURKHARDT (Effingham): I move we adjourn. (Seconded and carried.)

ADJOURNMENT.

HOUSE OF DELEGATES

Thursday Morning, May 22, 1919

The meeting convened at 9:00 a. m. on Thursday, May 22, 1919, in the Congregational Church, Peoria, Ill., President E. W. Fiegenbaum presiding.

Roll call.

The minutes of the previous meeting were read by the Assistant Secretary, Mrs. W. H. Gilmore.

MINUTES OF THE HOUSE OF DELEGATES

The House of Delegates convened at 8 p. m. on Tuesday, May 20, 1919, at the First Congregational Church, Peoria, Ill., President E. W. Fiegenbaum presiding.

The Credentials Committee presented its report, which was followed by a roll call. It was found that a quorum was present, and the president then declared the House of Delegates ready to transact its regular business.

The president appointed a Committee on Resolutions, to consist of Dr. John S. Nagel, Dr. H. P. Beirne, Dr. C. W. Poorman, Dr. W. H. C. Smith and Dr. Andy Hall.

Dr. Eberhart of Cook county asked that a committee of three be appointed to draft a suitable resolution in reference to the Osteopathic Bill now pending, to report back to the House of Delegates later in the evening, and such a committee was appointed.

The reading of the minutes was dispensed with, it being voted to accept the minutes of the last meeting as printed in the JOURNAL.

The report of the secretary was read and accepted. Also the report of the council and the treasurer's report.

The committee appointed earlier in the evening to present a resolution in reference to the Osteopathic Bill pending presented the resolution. It was voted to send copies of the resolution to suitable members of the Senate and to the governor.

By unanimous consent, Dr. M. L. Harris was asked to address the House of Delegates in regard to legislative matters at Springfield. In his remarks he complimented the legislature of the state on the open-minded attitude it had taken in regard to bills which the medical profession had opposed. It was voted that his remarks be given to the public press, so that the legislature and the people of the state might know the attitude of the medical profession.

The councilors of eight of the districts presented reports. No one was present prepared to give a report for the eighth district.

The Committee on Public Policy presented its report, which was followed by a report of the Medico-Legal Committee. No one was present authorized to report for the Committee on Medical Education. Dr. Burdick of Chicago reported for the Committee on Scientific Work.

Several resolutions were presented, which were referred to the Committee on Resolutions. A committee to prepare suitable resolutions on the death of Dr. MacMartin was appointed.

The House of Delegates adjourned at 10:30 to meet again Thursday morning.

The minutes were approved as read.

PRESIDENT FIEGENBAUM: The first order of business, after the reading of the minutes, is the selection of officers for the ensuing year.

The following officers were all nominated from the floor, voted upon by ballot and declared unanimously elected:

Dr. W. F. Grinstead, Cairo, President-elect.

Dr. George F. Weber, Peoria, First Vice-President.

Dr. Clara Seippel, Chicago, Second Vice-President.

Dr. W. H. Gilmore, Mt. Vernon, Secretary.

Dr. A. J. Markley, Belvidere, Treasurer.

Dr. T. W. Gillespie, Peoria, Councilor Fourth District.

Dr. C. B. Nelson, Springfield, Councilor Fifth District.

Dr. C. F. Burkhardt, Effingham, Councilor Seventh District.

Dr. J. H. Rice, Quincy, Delegate to the A. M. A.

Dr. M. L. Harris, Chicago, Delegate to the A. M. A.

Dr. W. C. Blaine, Tuscola, Alternate to Dr. Rice.

Dr. J. H. Walsh, Cook, Alternate to Dr. Harris.

MEMBERS OF PUBLIC POLICY COMMITTEE

Dr. Mary J. Kearsley, Chicago.

Dr. H. N. Rafferty, Robinson.

Dr. A. B. Smith, Woodstock.

MEMBERS OF MEDICAL LEGISLATION COMMITTEE

Dr. Noble M. Eberhardt, Chicago.

Dr. Edward Bowe, Jacksonville.

Dr. Don Deal, Springfield.

MEMBERS OF THE MEDICO-LEGAL COMMITTEE

Dr. J. R. Ballinger, Chicago.

Dr. George Stacy, Jacksonville.

MEMBER OF COMMITTEE ON MEDICAL EDUCATION

Dr. G. Henry Mundt, Chicago.

Rockford, Ill., was unanimously selected the meeting place for the next convention of the Society.

PRESIDENT FIEGENBAUM: The question of the per capita tax for the next year is under consideration. At what sum will you fix this per capita tax for the next year?

DR. V. A. McCLANAHAN (Mercer): I move that it be the same as last year, namely, three dollars per year per member, fifty cents of which shall go to the fund on Medical Legislation and one dollar to the Medico-Legal fund. (Seconded and carried.)

PRESIDENT FIEGENBAUM: Is there any unfinished business?

DR. J. H. WALSH (Cook): On Tuesday evening there was a resolution introduced to change the by-laws of the Society in order to create more representation from the Third Councilor District. I would move the adoption of that resolution, Mr. Chairman. (Seconded.)

DR. J. H. WALSH (Cook): I move that we refer back to the election of officers, and I would nominate for Councilor from that district with a three-year term Dr. John S. Nagel, of Cook.

The motion was seconded and carried, the Secretary cast the unanimous ballot of the Society for Dr. Nagel, and he was declared duly elected.

DR. H. N. MACKECHNIE (Cook): I should like to place in nomination Dr. S. J. McNeill, of Chicago, for Councilor for the one-year term.

The motion was seconded and carried, the Secretary cast the unanimous ballot of the Society for Dr. McNeill, and he was declared duly elected.

DR. C. W. LILLIE (East St. Louis): In view of the failure of the mass meeting on Health Sunday last Sunday and the incident expense thereto, I would move that Health Sunday ac-

tivities of the State Medical Society be discontinued. (Seconded.)

DR. SLOAN: I just want to say that when the Illinois State Medical Society met in Bloomington, that the lectures on Health Sunday did more good in Bloomington than all the advertisement that we got in any other way.

Now, it hasn't helped in Peoria, but it did help in Bloomington in a great many ways, especially in the fight against the osteopaths and the chiropractors. I am sure that it was true in Springfield that the people who have been going to chiropractors and faith cures and osteopaths were the ones that attended the churches Sunday morning. You can't get an audience Sunday afternoon; there is no use to try; but whenever you fill all the pulpits in a town like Bloomington or Rockford in the morning, you are going to help the profession out in that town, especially if the lectures are properly selected.

Dr. Lillie's motion was carried unanimously.

DR. C. J. WHALEN (Cook): I think there is at least one committee you ought to hear from in view of the fact that the health insurance matter is to come up in the American Medical Association, and you have a committee that has put a great deal of time in on the subject of Health insurance, and you ought to have a report from the Health Insurance Committee.

REPORT OF COMMITTEE ON COMPULSORY HEALTH INSURANCE

Your Committee on Compulsory Health Insurance of the Illinois State Medical Society begs to submit the following report:

The report covers not only the work done by your committee, but also touches upon the present status of health insurance throughout the United States.

Your committee submitted its first health insurance report at the annual meeting in 1917. This report was amplified at the annual meeting in 1918. The committee calls your attention to the fact that the first report was published in the February, 1917, issue of the *ILLINOIS MEDICAL JOURNAL*; that a criticism of same, together with a rejoinder, appeared in the March, 1917, issue of the same journal. The 1918 report of the committee was published in the July, 1918, issue of the *ILLINOIS MEDICAL JOURNAL*.

During the past year members of the committee have been frequently called upon to discuss health insurance before medical societies and investigating commissions in this and other states.

In 1917 the Illinois General Assembly created a commission to study the desirability of enacting health insurance laws in Illinois. This commission began its investigation in the fall of 1918. Your

committee appeared before the commission at its hearing in Chicago, November 8, 1918. The arguments used by your committee at this hearing were published in full in the *ILLINOIS MEDICAL JOURNAL*, January, 1919.

The published reports of the committee have been reproduced in pamphlet form and have been extensively circulated in Illinois. Throughout the United States, from Maine to California, from individuals and from state investigating committees, hundreds of requests have come to the committee for reprints of the reports of your Health Insurance Committee.

Your committee herewith also submits a resume of the compulsory health insurance legislation in this country.

Five or six years ago the American Association for Labor Legislation sent out thousands of copies of "A Tentative Draft of a Bill." The next year they caused a bill known as the Mills Bill to be introduced in the New York legislature. That was the first step in the legislative campaign anywhere in the United States. The bill did not receive more than ordinary notice. The following year a similar bill was introduced, and it did not come out of committee. Bills for the appointment of commissions were introduced in a number of states some two or three years ago, and commissions were appointed in Massachusetts, Maine, Connecticut, New York, New Jersey, Pennsylvania, Ohio, Wisconsin, Illinois and California. Maine reported adversely; Massachusetts' first commission reported favorably; second commission adversely. Connecticut's commission reported adversely. New Jersey reported favorably; Pennsylvania favorably; Ohio a bare majority favorably, but as second choice to sickness prevention. Illinois adversely; Wisconsin adversely and California favorably.

The third year the Nicoll Bill failed in New York. The Kehoe Bill, which was the same kind of a measure, failed in Michigan.

In California a commission to investigate was created by the 1915 session of the legislature, and at the 1917 session this commission reported in favor of compulsory health insurance and the submission of a constitutional amendment empowering the legislature to enact laws on the subject. The amendment was submitted to popular vote in November, 1918, and rejected by a vote of three to one. The president of the State Federation of Labor had been made a member of the Social Insurance Commission. The federation twice approved the amendment, but the election returns indicate that labor did not follow its leaders, every labor center in the state having rejected the amendment by a substantial majority. In fact, the amendment did not carry in a single county in California.

Massachusetts held a constitutional convention last fall and a social insurance plank was introduced and defeated.

During the legislative season just closing the Davenport Bill, in New York, passed the Senate as the result of some political trade between Governor Smith,

democrat, and four republican senators who became insurgent and created a majority for the democrats. After passing the Senate the Davenport Bill died in the Rules Committee. A somewhat similar bill was introduced in New Jersey, but died in committee. The Myers Bill, in Ohio, will probably have a hearing, but nothing more. A bill passed in Indiana for the appointment of a committee to study the subject. A similar bill in Michigan failed.

The matter has been agitated in Colorado, Maryland, Oregon and other states, each of which has killed either a health insurance bill or a bill creating a commission to investigate.

Some of the organizations that are on record against compulsory health insurance are:

- Michigan Manufacturers' Association.
- Ohio Manufacturers' Association.
- Associated Manufacturers and Merchants of New York.
- National Industrial Conference Board of Boston.
- The Commercial Federation of California.
- The New York Chamber of Commerce.
- The National Civic Federation.
- National Association of Manufacturers.
- National Drug Trade Conference.
- The National Association of Manufacturers of Medicinal Products.
- American Pharmaceutical Association.
- Commonwealth Club of San Francisco.
- Association of Insurance Commissioners.

MEDICAL ORGANIZATIONS

- Section of Preventive Medicine, American Medical Association.
- Illinois State Medical Society.
- Chicago Medical Society.
- Ohio State Medical Association.
- Federation of Medical Economic Leagues of New York.
- New York County Medical Society.
- Pennsylvania State Medical Society.
- Lackawanna County Medical Society of Pennsylvania.
- All medical societies in Brooklyn, N. Y.
- New York State Medical Society.

LABOR ORGANIZATIONS

- American Federation of Labor.
- The Executive Council of the American Federation of Labor.
- Boston Central Labor Union.
- Massachusetts Branch, American Federation of Labor.

Speaking at a meeting of the National Civic Federation, held in New York in January, 1917, the following labor leaders expressed the opposition of their organizations to compulsory health insurance:

Samuel Gompers, president American Federation of Labor.

Warren S. Stone, grand chief International Brotherhood of Locomotive Engineers.

Matthew Woll, president International Photo-Engravers' Union.

Hugh Frayne, organizer American Federation of Labor.

Peter J. Brady, president New York State Allied Printing Trades Council.

Timothy Healy, international president Stationary Fireman's Union.

FRATERNAL ORGANIZATIONS

- National Fraternal Congress.
- Ohio Fraternal Congress.
- Associated Fraternal Societies of California.
- New York Fraternal Congress.

POLITICAL AND LEGISLATIVE BODIES

In 1916 hearings before the House Labor Committee were held in Washington. No action was taken. Hearings covered a week.

In 1918 the Congress of the United States refused to create a commission to investigate further.

The Massachusetts Constitutional Convention rejected the scheme by a vote of nearly three to one.

We are not inclined to the view that the movement is gaining headway, although it might appear to be doing so if one stops to consider the number of states that have had it under consideration recently. We think there is great danger next year in New York State, as their legislature convenes annually. If, however, the proper kind of a campaign of education is carried on, there will be very little danger, because whenever this proposition is studied there is an overwhelming objection to it.

There are two forces attempting to drive this issue through—one the American Association for Labor Legislation, which you no doubt must know is nothing more or less than a misguided aggregation of professors of social economy, or parlor socialists, who are preaching socialism in our colleges. The second force is the welfare organizations and women's clubs. The welfare organizations are inspired by the desire to relieve human misery, and any measure they think may relieve the misery and suffering of the poverty-stricken class appeals as a good measure. The women's clubs are inspired by humane principle, but they have not given any consideration to the measure as one of state economy.

Your committee recommends that every state wherein this issue has arisen should become very active behind a campaign of education; otherwise we foresee a troublesome and worrisome year beginning with January 1, 1921.

In order that the subject may be brought to the attention of the delegates of the American Medical Association, the committee offers the following resolution:

Resolved, That the delegates from this Society to the House of Delegates of the American Medical Association be and are hereby instructed to introduce a resolution against compulsory health insurance in the

House of Delegates of the American Medical Association, and to support it in every way possible.

EDWARD H. OCHSNER,	CLEAVES BENNETT,
GEORGE APFELBACH,	W. F. BURRES,
C. A. HERCULES,	JOSEPH FAIRHALL,
CHAS. J. WHALEN,	W. D. CHAPMAN,
<i>Chairman.</i>	J. R. BALLINGER,
	<i>Secretary.</i>

Committee on Social or Health Insurance of the Illinois State Medical Society.

DR. J. H. RICE (Adams): I move that the resolution be adopted and the recommendations mentioned in the report be concurred in. (Seconded and carried.)

Dr. Peck, of the Tri-State Medical Society, announced the meeting of the Society to be held at Rockford, Ill., September 1-4, 1919, and invited all the members of the Illinois Society to attend.

DR. J. S. NAGEL (Chicago): The Resolutions Committee begs to submit the following report:

We consider it unnecessary for us to consider the resolution sent us by the New York State Medical Society because we have just passed a similar one.

Resolutions in reference to the death of Dr. Rainey and Dr. MacMartin were read. They were adopted.

The resolution in reference to Annual Registration of Physicians was read. It was unanimously adopted.

Resolution in reference to the Hospital Standardization was read. It was unanimously adopted.

PRESIDENT FIEGENBAUM: The Chair will say it is a rather new matter to him and a very important matter. The appointment of this Committee will be taken under consideration and the Committee appointed at a later day.

Resolution in reference to the Harrison law on Narcotics was read. It was unanimously adopted.

Resolution in reference to the demand of indemnity companies for itemized statements from physicians was read. It was unanimously adopted.

Resolution in reference to increase in physicians' fees was read. The resolution was adopted, with the amendment that copies of the resolution be sent to the Secretaries of the County Societies instead of to the press; and with

the further amendment that the specific amount of the increase be eliminated.

DR. V. A. McCLANAHAN (Mercer): I move that a vote of thanks be extended to the profession at Peoria for our entertainment. (Seconded and carried unanimously.)

DR. C. S. NELSON (Springfield): As a member of the Council, I am familiar with a few things that the general delegation is not and one is the tireless efforts that your present President has put forth toward the upbuilding of the Illinois State Medical Society. He is about to retire, and I think it is justly due to him that a vote of thanks of this delegation be extended to Dr. Fiegenbaum, a rising vote.

The House of Delegates arose and applauded.

PRESIDENT FIEGENBAUM: I extend to you my sincere thanks. I didn't do anything but my duty as I saw it.

DR. J. H. RICE (Quincy): If there is nothing further, I move you that the most harmonious House of Delegates that I have attended for many years in Illinois be now adjourned.

(Seconded and carried.)

ADJOURNMENT.

AUDITOR'S REPORT

ILLINOIS STATE MEDICAL SOCIETY

Chicago, June 23, 1919.

Board of Directors, Illinois State Medical Society.

Gentlemen: We made an examination of the cash receipts and disbursements of the ILLINOIS STATE MEDICAL SOCIETY for the year ended May 16, 1919, and submit herewith our report.

Receipts in the general fund during the year exclusive of advertisements, etc., totaled \$10,873.79, while disbursements amounted to \$3,804.31, leaving a balance of \$11,955.41 in this fund before deducting the net disbursements of the JOURNAL. The net disbursements of the JOURNAL totaled \$2,258.82 which resulted in a balance of \$9,696.59, in the General Fund at May 16, 1919.

We present herewith statements of the cash receipts and cash disbursements for the period and include the transactions of the Medico-Legal Defense Fund and Legislation Fund. The latter fund was created by the House of Delegates at the annual meeting in Springfield May, 1918, for the use of the Legislative Committee. The balance in the Medico-Legal Defense Fund at May 16, 1919, amounted to \$14,502.16, while the Legislative Fund showed a balance of \$1,934.41, thus increasing, the total of the three funds to \$26,133.16.

In our examination we noted retainer fees of

\$1,000.00 each covering the years 1918 and 1919, paid to Mr. R. J. Folonie, were charged to the Medico-Legal Defense Fund during the current year.

According to the books the funds were distributed as follows:

Liberty Bonds\$ 5,000.00

ON DEPOSIT:

Farmers State Bank, Belvidere, Ill..... 20,860.05
Illinois Trust and Savings Bank, Chicago..... 273.11

\$26,133.16

The amounts on deposit were in accordance with bank statements and certificates on file. We received a certificate from Mr. A. J. Markley, Treasurer, stating that the Liberty Bonds of \$5,000.00 are in his possession, however, they were not presented for our inspection.

We have accepted the book figures for the income from advertisements in the JOURNAL.

The amounts received from the Secretary have been verified by examination of the records kept by that individual, but we have not confirmed the receipts shown in his books by communication with the parties remitting to him.

In our examination we found that all disbursements were supported by cancelled checks and vouchers on file.

Yours very truly,

ERNST & ERNST,
Certified Public Accountants.

CASH RECEIPTS AND DISBURSEMENTS

ILLINOIS STATE MEDICAL SOCIETY

May 16, 1918, to May 16, 1919

GENERAL FUND

Balance on hand May 16, 1918.....\$ 4,886.33

RECEIPTS

Membership dues 10,873.79

\$15,760.12

DISBURSEMENTS

Council Expenses\$ 1,050.20
Legislative Committee Expenses..... 51.03
Historical Committee Expenses..... 107.20
State Meeting Expenses..... 288.67
Badges 36.10
Printing and Stationery..... 537.62
Miscellaneous Expenses 468.89
Stenographer 15.00
W. H. Gilmore—Salary..... 900.00
W. H. Gilmore's Ass't Salary..... 300.00
A. J. Markley—Salary..... 50.00

3,804.71

JOURNAL

\$11,955.41

Printing\$ 8,589.95
Postage 1,050.00
Commissions 722.63
Miscellaneous Expenses 189.04
Clippings 38.50
Stenographer 700.00
H. G. Ohls—Salary 780.00
Clyde D. Pence—Salary..... 900.00

\$12,970.12

LESS: Income from advertisements, etc.\$10,708.70

Interest from bank..... 2.60 10,711.30

2,258.82

BALANCE—May 16, 1919.. \$ 9,696.59

MEDICO-LEGAL DEFENSE FUND

May 16, 1918, to May 16, 1919

BALANCE—On hand, May 16, 1918.....\$13,420.85

RECEIPTS

W. H. Gilmore.....\$7,032.00
Interest 175.00

7,207.00

\$20,627.85

DISBURSEMENTS

Legal Services 3,564.94
Traveling Expense 126.60
Stenographer 15.00
Printing and Stationery..... 169.15
R. J. Folonie—Retainer Fee for 1918..... 1,000.00
R. J. Folonie—Retainer Fee for 1919..... 1,000.00
Honorarium 250.00

6,125.69

BALANCE—May 16, 1919..... \$14,502.16

LEGISLATIVE FUND

May 16, 1918, to May 16, 1919

RECEIPTS

W. H. Gilmore\$ 2,254.50

DISBURSEMENTS

Robinson's Adv. Agency.....\$201.87
Traveling Expense 50.00
Stamps 50.00
Telephone and Telegraph..... 18.22

320.09

BALANCE—May 16, 1919..... \$ 1,934.41

BALANCE MAY 16, 1919

General Fund \$ 9,696.59
Medical, Legal Defense Fund..... 14,502.16
Legislative Fund 1,934.41

\$26,133.16

DISTRIBUTED AS FOLLOWS:

Illinois Trust and Savings Bank—Chicago..... 273.11
Farmers State Bank—Belvidere, Ill..... 20,860.05
Liberty Bonds 5,000.00

\$26,133.16

COOK COUNTY CHICAGO MEDICAL SOCIETY

Regular Meeting, June 4, 1919

1. Revolutionizing the Antiquated Methods of Reducing Fractures.—R. Robinson Duff.

Discussion—Frederick A. Besley

James M. Neff

Emil Beck

2. Medical Research in the United States.—Carl Beck.

General Discussion.

June 18, 1919

Annual Meeting and Installation of New Officers.

CHICAGO OPHTHALMOLOGICAL SOCIETY Meeting of Nov. 18, 1918—Continued

SPONTANEOUS HEMORRHAGE INTO THE VITREOUS—Continued

Dr. Goldenburg: Had a similar case in a woman apparently healthy, who originally presented herself with a unilateral neuroretinitis which eventually cleared up, although the etiology was never discovered and every test and examination had been resorted to. About six months later she suddenly appeared with the statement that she had lost her vision in that eye the night before. She was taking a bath when, without any warning, everything became dark before this eye. Upon examination nothing was to be seen externally, pupil dilated, reflexes both direct and consensual present, ophthalmoscopic examination was impossible as we could produce no red reflex. The diagnosis of a hemorrhage in vitreous chamber was made, probably for ciliary body. Consultant concurred in diagnosis, but not in prognosis. She responded to antileptic treatment pushed to limit; this treatment gave the best result for her neuro-retinitis previously. Vision when last seen in this eye was 20/30 with some floaters in vitreous.

Dr. Tydings: I do not think that the etiology of her retinitis is dependent on any other factor than toxins. Have seen it in diabetes. Many cases which could not be diagnosed. Might be either diabetes or tb, and yet it is not dependent on any one factor. Any toxin might give rise to hemorrhage conditions in the retina.

Dr. Von Der Heydt: In connection with these vague, spontaneous hemorrhages I have two possibilities in mind, not as yet mentioned in this discussion. One is hemophilia, for the exclusion of which a coagulation test can be made. If in a case the hemorrhages are monocular, one must bear in mind the possibility of malignancy.

Dr. Woodruff: Have spontaneous hemorrhages in conjunctiva which are exceedingly common. So far no explanation for this. Occurs in people with apparently perfect health. Makes a great deal of difference where the hemorrhage is. These hemorrhages in the case of the young man are quite different from those cases where you have definite symptoms of syphilis. Might it not be that whether this hemorrhage came from the ciliary body or the choroid, might there not be some congenital malformation in these vessels? Quite a number of cases reported like this young man. They occur over and over again through a period of years.

OPHTHALMOSCOPY WITH THE RED-FREE LIGHT OF VOGT

Dr. Robert Von Der Heydt read a paper on this subject as follows:

I was very fortunate in being able to obtain directly from Professor Vogt, of Basil, all the details pertaining to the red-free light and the method of its production, with the permission to present all this new and interesting data to the Society.

The fundus, as you see by this illustration (passed around charts) is blue-green, as all rays except the green, blue and yellow are eliminated. This is accomplished by filtration through two liquids. The one solution is an aniline dye, the manufacture of which has been discontinued. I succeeded in importing a sample. I now have enough of this sample to supply any ophthalmologist who might be interested. The direction of the retinal fibres of the maculo-papillary bundle and those temporalward of the macula can be plainly followed and their course and interweaving are a most interesting revelation.

In 1913 Vogt published his first reports of ophthalmoscopy with the red-free source of illumination. Since then much of interest pertaining to the normal as well as new diagnostic observations in pathologic fundi, have been reported.

As filters Vogt uses two solutions—one a copper sulphate, the other a blue-green aniline dye. For illumination an arc light with condensing lens. With our ordinary light slight palors of the disc must remain a matter of opinion, and the yellow of the macula cannot be seen. With the red-free light this yellow can be plainly seen in the living eye.

New and interesting reflexes, both of the retinal surface and vessels are described. The yellow discoloration of the lens in age can be measured. A great contrast is noted in monolateral aphakia. New details of the macula as respects its size, absence of pigmentation (except secondary) reflexes—surface—vascularization and direction of vessels are described.

The foveal reflex ordinarily seen only in youth can be observed in old age with the red-free light. Most important is the ability to follow minutely the direction of the nerve bundle and fibre layer in the whole of the retinal surface—a matter of great importance

as I will endeavor to show in the near future by presenting some intensely interesting findings by Vogt in pathologic fundi with the red-free light.

IROQUOIS-FORD DISTRICT

The regular quarterly meeting and dinner of the Iroquois-Ford Medical Society was held in Gilman, Illinois, Tuesday, June 3, 1919.

PROGRAM

1. Enforcing Selective Service Regulations of Exemption Boards During the World War the Physicians' Part and the Lessons He Learned.—S. M. Wylie, M. D., Paxton.
2. Fractures of the Clavicle.—D. W. Miller, M. D., Gilman.
3. (a) Statistics of the Recent "Flu" Epidemic.
(b) Eighteen Months Internship in Cook Co. Hospital and Its Value.—Aloysius Larkin, M. D., Melvin.
4. Report of the Illinois State Medical Society.—N. T. Stevens, M. D., Clifton.

W. L. COTTINGHAM,
Secretary.

MADISON COUNTY

Special Meeting.

The Madison County Medical Society met in Edwardsville, Ill., on April 20, 1919, for the purpose of expressing its attitude on various medical bills now before the legislature. In the absence of the president the vice-president, Dr. F. O. Johnson presided. Members present: Schreifels, Kessinger, Ferguson, Moore, McKinney, Meriwether, Robinson, Taphorn, Hirsch, Molden, Range, Beard, W. H. C. Smith, J. H. Fiegenbaum, Veatch, Giberson, Schroepfel, Hale, Berry, R. B. Scott, J. E. Scott, Schroeder, Glauner, Luster Johnson, Pfeiffenberger, Binney, Avery, King, Shaff and E. W. Fiegenbaum.

Invited visitor: Hon. Norman G. Flag, of Moro, Ill. The secretary briefly stated the object of the meeting and called the attention to several medical bills that demanded our attention and especially to Senate Bill No. 360 and House Bill No. 549. On motion the chair appointed Drs. Luster, Smith and Ferguson as a committee to draft suitable resolutions expressing our sentiments with regard to above bills. The committee presented the following:

"At a special meeting of the Madison County Medical Society held on April 20, 1919, at the Court House in Edwardsville, Illinois, attended by 30 members, it was unanimously voted that the following resolutions should be presented to the chairman and members of the Senate Committee on License and Miscellany, now considering Senate Bill No. 360.

WHEREAS: We believe that House Bill No. 360 is subversive to the best interests of the medical profession of the State of Illinois and its passage would work a gross injustice to said profession, be it hereby

Resolved: That we, as a society protest against the passage of said bill and ask such consideration of this committee and such support as will prevent its passage. Be it further

Resolved: That this society believes it a gross injustice for any society or organization of men or for any individual to engage in the treatment of human ills, without entering through the portals created by the present Medical Practice Act, which is acknowledged to be the best Medical practice act in the country at this time."

E. C. FERGUSON,
W. H. C. SMITH,
R. D. LUSTER.

The same resolutions were adopted to House Bill No. 549. The Hon. Norman G. Flagg, addressed the society and explained the process of legislative procedure and asked that the members write to their representatives expressing their views on pending measures, giving briefly such arguments as they care to present. Mr. Flagg was given a rising vote of thanks for his interest in our behalf.

A committee, consisting of Drs. W. H. C. Smith, Binney, J. W. Scott, Siegel and Kiser was appointed to represent this society before the Senate Committee on License and Miscellany at its session on April 23, 1919. On motion it was ordered that the society pay the expenses of this committee.

Our May Meeting

The Madison County Medical Society met at the Court House in Edwardsville on May 2, 1919, with President Dr. Chas. R. Kiser in the chair.

Twenty-nine members and ten visitors present.

Drs. E. A. Everett, W. E. Krumsiek and Jos. J. Fitzgerald, all of Granite City, were elected to membership.

On motion of Dr. F. O. Johnson it was decided to meet in Granite City in June. On motion of Dr. W. H. C. Smith, the secretary was instructed to invite the members of the medical societies of Greene, Jersey and Macoupin counties to meet with us on July 11, 1919, at Beverly Farms, Godfrey.

On motion, it was ordered that the society assume the charges for the care of Marie Hagerman at the Harrison Colony for another month.

Our speaker, O. W. Dilley, of Springfield, failed to arrive. On motion, adjourned.

MACOUPIN COUNTY

The Macoupin County Medical Society met in the Commercial Club rooms at Girard, Tuesday, May 27, 1919, and was called to order by President Dr. E. G. Motley, of Virden.

Dr. A. H. Simmons of Girard, newly elected president, gave his inaugural address and assumed the chair. In his address, he advocated a more regular attendance at the society meetings, a better business action among the members and an increase in the fees to be paid for services rendered by them.

Dr. L. D. Rockefeller of Bunker Hill, as vice-president, Dr. T. D. Doan of Scottville, as secretary, Dr. W. B. Dalton of Scottville, Dr. C. D. King of Gillespie, Dr. G. E. Hill of Girard, as the Committee of Censors, were also installed in their respective offices.

Dr. H. B. Hemenway of Springfield gave an instructive address on Malaria, Hookworm and Tracoma. He also gave some interesting items regarding "Vital Statistics."

The next meeting of the society will be held July 22, at Staunton.

T. D. DOAN
Secretary.

Personals

Dr. George F. Suker, Chicago, has returned from military service and resumed practice.

Dr. Otto T. Freer, Chicago, has been elected a Fellow of the Royal Society of Medicine, London.

Dr. Clarence D. McKinney, has returned from military service in Europe and resumed practice in Paxton.

Dr. John Patrick Kane, after two years military service in Europe, has resumed practice in DeKalb.

Dr. Arvid E. Kohler has been appointed city physician of Moline, succeeding Dr. Willis T. Hinman.

Dr. Irving H. Neece, Palmyra, assistant surgeon, U. S. P. H. S., has been appointed health officer of Decatur.

Dr. William M. Hanna, Aurora, has been elected medical director of the Grand Army of the Republic for Illinois.

Dr. J. Benjamin Roe, of Oregon, Ill., has returned to his practice after a year in the Medical Corps, U. S. Army, on transport duty.

Capt. Franklin Maurer, of the Springfield Medical Unit, has returned from service in France and resumed practice in Springfield.

Dr. Norval N. Pierce, Chicago, was elected president of the American Laryngological Association at its recent convention in Atlantic City.

Dr. Eugene Cohn, superintendent of the Kankakee State Hospital, was exonerated by Judge Gillan of voting illegally in the April election.

James A. Harvey, Lieut.-Col., M. C., U. S. Army, commanding officer of Base Hospital No. 84, returned from abroad with the Rainbow Division.

Herman H. Tuttle, Lieut.-Col., M. C., U. S. Army, Springfield sanitary inspector of the Thirty-Third Division, returned with the division from France.

Emmett A. Garrett, Lieut.-Col., M. C., U. S. Army, formerly health commissioner of Peoria, who has been on duty overseas, arrived in New York, June 6.

Dr. E. W. Johnson, a police ambulance surgeon in Chicago, received severe burns upon opening the door of a gas filled room while trying to rescue a suicide.

R. H. B. Gradwohl, Lieut.-Commander, M. R. C., U. S. Navy, after a year in the service, has resumed the direction of his Biological Laboratories and Pasteur Institute in St. Louis.

P. J. H. Farrell, Lieut.-Col., M. C., U. S. Army, Chicago, commanding Base Hospital No. 81, reached Newport News, June 16, after more than a year of service on the Western Front.

Bellenden S. Hutcheson, Mound City, Capt., M. C., U. S. Army, who has been on duty in France and who won the Victoria Cross and British Military Cross, arrived home, June 6.

Lewis Wine Bremerman, Lieut.-Col., M. C., U. S. Army, Chicago, who recently returned from France, has been directed to present a report to the government urging the adoption of a plan of universal military training for the benefit of the young men of the country.

Dr. Winfield Scott Hall, for more than twenty years a member of the faculty of Northwestern University Medical School, Chicago, has been appointed to take charge of the newly organized department of social hygiene of the Presbyterian Board of Temperance and Moral Welfare.

The Rush Alumni Association at its annual banquet in the Auditorium, June 6, presented Dean John M. Dodson with a watch in honor of his thirty years of service to the college. The Association also established a fund for an an-

nual "John M. Dodson" lecture on medical education, history or other subject relative to the advancement of medical science.

News Notes

—An addition to the Lutheran Hospital, Moline, is to be built this summer at a cost of \$65,000. With this addition the institution will have a capacity of 125 beds.

—The Municipal Tuberculosis Sanitarium in Chicago had a new \$100,000 auditorium building dedicated by city and state officials, June 29. It is called "Chicago's' Hall for Health Education." It will be used for vocational training and entertainment for the patients.

—At the annual election of the Chicago Medical Society, June 17, the following officers were elected: president-elect, Dr. Ludvig Hektoen; secretary, Dr. Hugh N. MacKeechnie; councilors at large, Drs. Jacob C. Crafft, Charles J. Whalen, Samuel J. McNeill, G. Henry Mundt and Clarence B. King, and alternate councilors at large, Drs. John W. Davis, A. Charles Kubicek, Edward E. Reininger, Albert C. Hammett and William G. Alexander.

—Sick or disabled soldiers, sailors, marines or nurses who have been discharged from military service since Oct. 6, 1917, will be provided with medical and hospital care by the action of the U. S. Public Health Service. The headquarters of the eighth district, which includes Illinois, Michigan and Wisconsin, is located at 58 E. Washington Street, Chicago. Applicants should apply directly to Bert W. Caldwell, Eighth District Supervisor, or to any local chapter of the America Red Cross.

—Plans for the resumption of the preliminary work for the new medical college and hospital buildings for the University of Chicago has again been taken up. The new medical school will be constructed on the property owned by the university on the south side of the midway, and the first building to be erected will be a hospital and dispensary to cost \$1,000,000. The school for practitioners will be located near Rush Medical College, and the hospital will be known as the Albert Merritt Billings Hospital. The buildings planned will cost \$17,000,000.

—At the annual meeting of the Northwestern University Medical Alumni Association held in Chicago, June 16, under the presidency of Samuel C. Stanton, Major, M. C., U. S. Army, the following officers were elected: president, Dr. William E. Quine, '69; secretary, Dr. Alexander A. Goldsmith, '01; and Necrologist, Samuel C. Stanton, Major, M. C., U. S. Army, '92. On the mornings of June 16 and 17, instead of the usual clinic week, addresses were delivered to the Alumni at the school, by members of the faculty and alumni who had been in war service.

—The annual meeting and dinner of the Alumni of the College of Medicine of the University of Illinois was held at Chicago, June 14, and the following officers were elected: president, Henry L. Boker, '99; president-elect, Dr. Karl A. Meyer, '08; vice presidents, Drs. John W. Birk, '01, and Alexander W. Burke, '09; secretary, Dr. John C. M. Krasa, '13; treasurer, Dr. Jay L. Armstrong, '04; member of the executive committee, Dr. Emory R. Hayhurst, '08, Columbus, Ohio, and alumni counselor, Dr. Robert W. Morris, '02; Necrologist, J. W. Beveridge, '98.

Marriages

LEON UNGER, Chicago, to Miss Nina Kleinman of New York City, June 1.

HARRY LEE HUBER to Miss Eleanor Johnson, both of Chicago, June 14.

ALFORD E. BUDDE, Capt., M. C., U. S. Army, North Chicago, to Miss Madeleine de Colnet d'Huart of Bayswater, London, at London, April 16.

FRANCIS PATRICK MACHLER, Capt., M. C., U. S. Army, Chicago, on duty at Embarkation Hospital, Camp No. 2, Newport News, Va., to Miss Ruth A. Steele of Rogers Park, Chicago, at Richmond, Va., May 29.

Deaths

FRANK M. EWING, Lincoln, Ill.; Jefferson Medical College, 1882; aged 62; died at his home, June 5.

JOSEPH B. EVERSOLE, Adeline, Ill.; Rush Medical College, 1866; aged 86 died at Ogle County Home, Oregon, Ill., May 24.

VANDALIER N. SWAN, Maywood, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1887; aged 71 died at the Oak Park Hospital, June 24.

SOLOMON LEWIN, Chicago; Ensworth Medical College, St. Joseph, Mo., 1892 aged 62; died in Los Angeles, May 24, from aneurysm of the aorta.

EFFIE ARMILDA CURRENT, Danville, Ill.; Medical College of Indiana, Indianapolis, 1901; aged 44; died at the home of her mother in Elmwood, June 11.

HENRY A. BREMMER, Ashton, Ill., Chaddock School of Medicine, Quincy, Ill., 1886 aged 67; health officer of Ashton; died in the Lincoln (Ill.) Hospital, May 11, from heart disease.

BERTHA BARBARA SCHROEDER, Chicago; Loyola University, Chicago, 1908; aged 34 a member of the Illinois State Medical Society died in Mercy Hospital, Chicago, June 1, from heart disease.

JAMES MITCHELL TAYLOR, Chicago; Homeopathic Medical College of Missouri, St. Louis, 1869; aged 71, a member of the Illinois State Medical Society; died at his home, May 26, from pneumonia following a surgical operation.

HARRY J. HASELDEN, Chicago, Ill.; University of Illinois, College of Medicine, 1893; aged 49; Chief Surgeon, German-American Hospital; whose advocacy of sterilization of defectives and refusal to operate to save the lives of defective infants received great publicity; died in Havana, Cuba, while on a vacation, June 13, from cerebral hemorrhage.

CLARENCE F. BARKER, Onkama, Mich., formerly of Chicago; Hahnemann Medical College, Chicago, 1880; aged 67; for twenty years professor of surgery in his alma mater; died in Milwaukee, June 7, from shock following the amputation of a leg, on account of diabetic gangrene.

EDWARD KENT ARMSTRONG, Chicago; Dearborn Medical College, Chicago, 1904; University of Illinois, Chicago, 1905; Northwestern University Medical School, Chicago, 1910 aged 38; a specialist in pediatrics superintendent of the Municipal Contagious Disease Hospital of Cook County, 1917; who had served in France since April, 1918, and was later assigned to duty in Palestine, where he was engaged in repatriation work; is reported to have been killed recently in an automobile accident.

JAMES HERBERT STOWELL, Chicago; Northwestern University Medical School, Chicago, 1881; a Fellow A. M. A. aged 65; a specialist in internal medicine; a member of the council of the Chicago Medical Society and president of the Society in 1900-1901; once chairman of the Medical Section of the Illinois State Medical Society; a member of the consulting and examining board of Cook County Hospital; attending physician to the Chicago, Baptist and Samaritan hospitals medical director of the United States Annuity and Life Insurance Company; died suddenly at his home, May 31, from heart disease.

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THE RELATIONSHIP OF THE STATE DEPARTMENT OF PUBLIC HEALTH AND THE MEDICAL PROFESSION.*

C. ST. CLAIR DRAKE, M. D.,

Director of the State Department of Health,
SPRINGFIELD, ILL.

In performing the functions and duties imposed upon it by law,—in affording the maximum of protection to the lives and health of the people,—it is essential that the State Department of Public Health shall reach more or less directly every community and every man and woman in the commonwealth. The theory of preventive medicine has undergone radical changes during the past generation. Health officials are no longer permitted by intelligent public opinion to content themselves in merely meeting emergencies as they arise. Health promotion has become more important than disease prevention and disease prevention has come to be regarded as more to be considered than disease suppression. The old time policy of acting only in the development of emergency; of merely standing ready to make the best of a bad situation, in mending the damage after it has occurred, has been relegated to another and less enlightened day. To attain its best results, the Department should make its influence felt in every county in the State during each of the three hundred and sixty-five days in the year.

And in carrying out its work of prevention, the Department must deal not with masses nor yet with classes; but must endeavor to arouse the interested attention of the individual. Our experiences during the war have driven home the meaning of the public health axiom that a state or nation can be only as strong as the individuals who constitute it, and those experiences demonstrated to us that preventable disability is far

more prevalent among the young men of the nation than we were ever willing to believe before.

In reaching out to the people of the State, the Department employs the public press and other means of popular education while an effort is made to maintain a personal contact with every community through a friendly and helpful relationship with the local health authorities. Regardless of these means of contact with the people, steadily developing in reaching power though they are, the Department relies for its most direct and most helpful influence upon the family physician who is the medical and health advisor of the individual. The success or failure of any endeavor for the betterment of the public health depends very largely upon the attitude of the medical profession and, as a rule, that attitude has been sympathetic and encouraging in the extreme and the cordial relationship which has existed, while tremendously helpful to the Department, has not been wholly without compensating benefits to the doctor.

During the forty years, since the creation of the old State Board of Health, preventive medicine has progressed with giant strides. Science has developed truth that has afforded remarkable opportunity for progress and, in so doing, has imposed serious obligations. The changes in health administration have at times been radical if not revolutionary; but no more radical and no more revolutionary than the changes which have come in our scientific thought. Other states, perhaps more progressive, further seeing and more liberally financed, have set a pace in public health advancement which has been difficult to follow; but with all of the changes necessitated by this movement forward, the physicians of Illinois have been generally sympathetic, interested that the State should maintain a health service commensurate with her intellectual and commercial supremacy and guaranteeing to the people the highest degree of protection.

In all of these years of public health progress,

* Read before the Section of Public Health and Hygiene of the Illinois State Medical Society, Peoria, May 20, 1919.

however, there have never been such rapid strides and such insistent demands for efficient service as there is at the present time and has been since we began our participation in the world war, and that demand for progress, far from abating, grows more pronounced as we enter upon the period of reconstruction. The Federal government is apparently determined that the nation shall never again suffer from the degree of physical unpreparedness, much of it preventable, that has been disclosed during the past two years, and is calling upon the State health departments for readjustments of programs with that end in view. And the State departments can have but one reply to this call for service, in which they will necessarily have the whole-hearted and sympathetic cooperation of the medical profession.

The physicians of the county responded with remarkable unison to the national call in time of war and they will respond with equal loyalty to the nation's demands in times of peace. And the policy of the new health program enunciated by State and Federal health organizations tends more and more to the reaching of the individual and the promotion of individual health in which the physician is always an indispensable factor.

Modern health administration in asking much of the physician is likewise giving much to the physician. The individualization of health work, instead of threatening the material interests of the doctor, actually benefits him in many ways. It is safe to say that the more intimately the individual physician becomes acquainted with the aims and purposes, the activities and underlying motives of the State Department of Health, the more valuable his influence becomes to the people of his community and the more useful the department becomes to him in the pursuit of his practice.

Health officials are urging at this time periodical physical examination for all persons as the means of detecting insidious, organic diseases in their incipient and easily curable stages and, while the medical profession may be called upon at certain times to render gratuitous service in such examinations for purposes of education and demonstration, it is unquestionably true that the establishment of this excellent custom is not only capable of saving or prolonging thousands of human lives, but brings increased practical returns to the physician. The more generally the

people think health and talk health, the more generally they seek medical counsel and guidance and the more generally the physician is employed.

It is invariably true that, whenever there are established strong tuberculosis associations with their dispensaries and nursing service together with the educational and publicity campaigns essential to their success, the tuberculosis specialists and general practitioners have an actual increased clientele both among well-to-do people, actually suffering from tuberculosis and seeking early treatment for it, and among persons who have come to think seriously of their own health on account of the popular agitation of the subject. This is likewise true of communities in which campaigns against venereal diseases have been launched with their attendant dispensaries and other medical activities. In all such communities, specialists in venereal diseases and general practitioners report increased demand for medical service and material decrease in counter prescribing, self-medication and decrease in the patronage of advertising quacks. In these cases, the course which is best for the people of the community and which is insistently urged upon them is likewise best professionally and financially for the reputable physician.

In the clinics for crippled children, especially designed for the victims of poliomyelitis, sixteen of which are now in successful operation throughout the State, the department acts largely as consultant, receiving clinical patients through the local physicians and returning the patients to the local physicians for interim and supplemental care and treatment. In practically every instance, these clinics have been declared as directly helpful and profitable to the physicians of the counties in which they are situated.

The same helpful attitude is maintained by the diagnostic laboratories of the department in its relationship with the medical profession. While these laboratories are, of course, maintained for the benefit of the people as a whole, the service of the laboratories is rendered almost entirely to and through the physicians of the State. While occasional sputum specimens are received from laymen, the name of the attending physician always accompanies the specimen and the report is sent to the physician and, in practically every instance, it is found that such specimens are sent through the direct advice or

suggestion of the doctor. In the case of Wassermann tests, it is doubtful if the laboratory ever received a specimen except from the physician and this is likewise true of specimens from patients suspected to be suffering from diphtheria, typhoid fever and other communicable diseases. In actual practice, the laboratory is maintained and operated for the convenience of the medical profession, saving the individual physician hours of labor and considerable outlay and money and, if one may judge by the increasing demands for laboratory service, this convenience is becoming generally appreciated by the medical men throughout the State.

On the other hand, the more generally the medical profession engage in modern health activities in their own communities, the more frequently they utilize the services of the staffs of the several divisions of the department, the more constantly they employ the services of the diagnostic laboratories for the early and exact detection of communicable diseases, the greater assistance they are rendering the department in meeting its obligations to the people—the obligation concerning the interests of the lives and health of the people.

In its relationship with the local health authorities throughout the State, the department endeavors to maintain the same helpful and cordial attitude which characterizes its relationship with the medical profession. This relationship is cooperative rather than supervisory or dictatorial in character, the department offering constantly to render such specialized service as its several divisions may afford which may lead to the satisfactory solution of local health problems and very rarely, and only in the face of extraordinary conditions, exercising the supervisory authority given the department under the law.

This service, freely offered and very generally employed, ranges from the epidemiological service of the Division of Communicable Disease, the engineering assistance which comes through the Division of Sanitation and includes the framing of health ordinances, the making of surveys, the organization of health departments, the designing of isolation hospitals, the establishment of public health nursing service and kindred friendly offices of many kinds.

This cooperative relationship with communities

and especially with the medical profession gives promise of being even more definitely developed through the State and county collaborating health service which is now being definitely organized. In the working out of this plan, each county medical society is asked to designate one or more of its members who represent the county in this collaborating service. In the absence of the district health officer, and in the existence of an emergency, these county representatives will be called upon to act for the State, receiving therefor reasonable compensation on a per diem basis.

The representatives from all counties will be brought together from time to time at central points for conference on public health subjects and particularly to consider the more recent advances in preventive medicine of more or less technical character, with the understanding that they shall return to their home communities and shall present the results of these conferences at meetings of their county medical societies.

It is believed that, through this plan, the department will acquire a very close and intimate contact with the physicians in all parts of the State and that the more modern health problems, which the practicing physician has been in the habit of relegating to the health officer, will acquire a new interest and that all medical men will come to look upon themselves as more definitely responsible for the public welfare than they have in the past.

So far, forty-six counties have responded to the invitation of the department to participate in the development of this service, and with the resumption of peace and the return of more normal times, it is expected that the service may be readily completed,—a service which will prove helpful to the department in meeting the demands of the people and helpful to the medical profession of Illinois.

THE RESULTS TO BE EXPECTED FROM A TONSILLECTOMY OR AN ADENECTOMY

C. F. BURKHARDT, M. D.,
EFFINGHAM, ILL.

I will preface my subject by assuming that either of the operations (and in most cases of children in which operative procedure is indi-

cated we find that the combined operation is necessary) is performed by an operator especially skilled in this special field of surgery. For it is an undebatable fact that if the best therapeutic results are to be expected, the operative technic should measure up to the nearest approach to the present-day standard of perfection. The operation which leaves a clean fossa, and the pillars and all other normal parts of the throat uninjured, is the ideal operation. It is unimportant as to the method or technic employed by the individual operator, so long as the above described standard is maintained.

Dr. Giles¹ says: "The first point is to recognize that tonsillectomy is not a trivial operation, which an apprentice may safely undertake, but a procedure requiring an expert's qualifications, and by no means devoid of danger. Second: There are in all medical centers at the present time specialists competent to do this operation safely and satisfactorily. Third: The charge made by specialists is not, as many suppose, exorbitant, but moderate, and where the patients are indigent, they can secure without cost the most skillful and considerate treatment."

There are quite a number of pathological conditions at the present time which are believed to be traceable to the tonsils or adenoid body; and if the indictment is erroneous with reference to a part of these, there is still a considerable number left for our consideration, or to justify and indicate the removal of a vast number of tonsils and adenoids.

Now the phase of this subject which I wish to emphasize, and which we, as throat specialists, should be very deeply concerned in, is, what permanent results can we expect or promise our patients, from a therapeutic standpoint? That is, what is the correct prognosis as regards the clearing up of the pathological condition for which we have held the tonsil or adenoid responsible, and on which we based our indication for operating?

If the dignity of tonsil and adenoid surgery is to be maintained, more care should be exercised as regards the examination and diagnosis previous to operation, and avoid unnecessary operation and the sacrifice of normal innocent tonsils. I am convinced from my personal experience that

there is a strong tendency, at the present time, to be a little careless in the diagnosis of the indications for tonsillectomy, especially, and to charge up against the tonsil practically every disease to which the human body is liable. This is already arousing justifiable criticism.

The majority of cases of poor results or failures following tonsillectomies are due to carelessness in studying the case, thereby causing the removal of tonsils for the relief of pathological conditions for which they are entirely innocent. This error is more likely to occur where the condition is due to systemic infection. Acute or chronic arthritis, endocarditis, pericarditis, chorea, acute or chronic nephritis, neuritis, osteomyelitis, appendicitis, peritonitis, infectious jaundice, cervical adenitis, and chronic toxemia, are some of the most common diseases which originate from systemic infection; and we realize that the tonsil is guilty and responsible, *per se*, in many cases, for the above diseases.

But while this is true, there are many cases in which the disease is due to some other focal origin, and without proper and careful search for the guilty primary foci, the tonsils are assumed to be guilty, and are removed, without proper clinical evidence of their guilt; and if the foci of infection is located elsewhere, in the gums or teeth, the gastro-intestinal or genito-urinary tracts, the ears, or the nasal accessory sinuses, the results of a tonsillectomy will, of course, prove a failure. This mistake, obviously, can only be made in those cases where the tonsils are free from infection and are causing no obstruction; for if they contain infection or are causing obstruction, the safest rule is to enucleate them. It is a pretty safe rule, however, to regard the tonsil as a dangerous focus of infection, until it is proven to be innocent after a careful examination.

But the point I wish especially to emphasize is that a careful, painstaking examination should be made, before a tonsillectomy, in every case where there is a disease supposed to be due to a systemic infection, and the tonsil is under suspicion. I believe this will materially increase the percentage of good results.

There is one point which I consider important, in connection with the examination of the tonsils, especially where they are believed to be responsible for a systemic infection, and that is the ap-

1. GILES: Disappointments Following Tonsillar Operations and the Remedy.—Penn. Med. Journal, July, 1917.

pearance of the anterior pillar. If the tonsil contains infection of a chronic character, in the great majority of cases the pillar will have the appearance of a chronic congestion, i. e., a dark red color. There may be no other history or clinical evidence of tonsil infection or disturbance, but if this condition or appearance of the anterior pillar is present, I have found it a safe rule to advise the removal of tonsils for infection. This condition or sign of infection is usually found in the submerged type of tonsils.

In that class of cases where the child is anemic, white faced, open mouthed and catarrhal, a favorable prognosis can be made with some degree of certainty, and in most cases assurance can be given of very excellent results; for after the removal of the adenoids, or both adenoids and tonsils, which are obstructing free breathing or drainage from the sinuses or eustachian tubes, and perhaps in some cases supplying the circulation with infection, in the majority of cases of this class the child will improve rapidly, and in a short time become almost robust. But while this is true in most cases of this class, we should not lose sight of the fact that there are at least a small percentage in which the results will be disappointing. I refer to those children in which operative measures have been so long neglected that there are permanent anatomical changes, or permanent impairment of function; for if there exists permanent impairment of mentality, of the hearing, of the development of the chest, of the development of the face or nose (I refer to the typical adenoid face), and the character of the voice, we cannot expect results to be other than only fair. And it is best to be very guarded in our prognoses, and not promise very much in this class of neglected cases, for if we do, the patient, or the parents of the patient, are going to censure the operator severely. The only hope that should be held out is that perhaps the impairment of function will be stayed in its progress, and if there is any improvement in their condition they will be lucky. Of course, if the condition of the throat is causing general anemia, good results can be promised in that respect only.

The cases in which results following operation will usually be exceedingly good, and can be prognosed favorably and accurately with few exceptions, are those in which the indications for operation are recurring attacks of acute tonsillitis,

cervical adenitis, in the early stage of tube or ear disturbances, mouth breathing, and recurring attacks of peritonsillar abscess.

Recurrence of lymphoid tissue in the tonsillar fossæ, following a good clean tonsillectomy, where the tonsil is removed within its capsule, is not so rare as some authorities would have us believe. But in practically all cases where tonsillar tissue is found, it is due to faulty technic, or to a condition which occurs even in cases operated on by the most skillful operators. I have reference to the fact that lymphoid tissue is liable to be transplanted from the lingual tonsil into the base or lower half of the tonsillar fossæ. I fully treated this phase of the tonsil operation in a paper which I read before this section May 9, 1917, entitled "The Importance of After Treatment of the Tonsillar Fossa During the Secondary Period Following Tonsillectomy," to which I refer.

The prognosis, as regards non-recurrence of lymphoid nodules in the nasopharynx after the removal of the pharyngeal tonsil, is favorable; for a recurrence, to any material extent, is very rare, provided the adenectomy is skillfully performed. Most cases of recurrence can be charged to poor technic. The most common error which causes apparent recurrence is the failure to properly clean out the fossæ of Rosenmüller. Personally I have found two instruments which I prefer for the operation—La Force adenotome, for the reason it makes a clean cut, and usually removes all the central mass with the least possible traumatism; I follow this with my index finger (making sure that it is clean), and clean out the fossæ of Rosenmüller. I have found no other instrument so efficient and intelligent as the index finger for this part of the operation. Recurrence is occasionally seen after the most careful operation, but it is the exception.

It is indeed unfortunate that cases of tonsillectomies and adenectomies are not followed up more closely; for definite, reliable statistics, as to the results from these operations, are very meager. What is needed is for all operators to make a greater effort to obtain reports from their operative cases, and thereby be able to tabulate the permanent therapeutic results in the various indicated pathological conditions for the relief of which the operations were performed. These reports and observations of cases should cover a sufficient length of time to make them reliable.

I realize that it is a difficult task, and one which, so far, I have been unable to accomplish; but when these results are tabulated to any considerable extent, they will be of inestimable value to the profession.

In conclusion, I wish to state that I believe tonsillectomy and adenectomy are among our most valuable therapeutic aids, and I am not advocating their abolishment; but am only urging for a more painstaking care in diagnosis and prognosis, in order that in every possible case there may be no question as regards the indications for operating. And if this rule of carefulness is strictly observed, there will be a higher percentage of good results and fewer unnecessary operations.

DISCUSSION.

DR. A. H. ANDREWS (Chicago): To one who has been watching tonsils for a good many years, these papers become of great interest. Time was when the work of the tonsil operator, the man interested in tonsil questions, seemed to be that of trying to appreciate the deleterious effect of diseased tonsils. I have read many papers on that subject in the late nineties and up to 1910. Along about that time, or a little earlier, Dr. Billings read his paper on "Focal Infections." That paper was copied in all of the English medical journals and translated into many other journals in many other languages, and a wave of tonsil surgery passed over this country that nothing seemed able to stop.

Some years ago, I had occasion to ask this question in the examination of a lot of medical students: Give the indications for removal of the tonsils. They named all the diseases that Dr. Burkhardt named and all the diseases that the other readers named, but one man summed the whole thing up in this: The presence of a tonsil. He proposed, whenever there was a tonsil present, that it was a good indication for an operation.

In recent years, the message in the papers written by specialists is care and caution and not to remove tonsils unnecessarily. I think that is right. I was glad to hear the papers and glad to hear them all emphasize the importance of not removing tonsils that should be let alone.

I want to, in just a word, emphasize the last suggestion made by Dr. Burkhardt. We have been doing tonsillectomies now eight or ten years. It is getting to be the time when we can take a child who is tonsillectomized at four or five years and follow that child through from five to ten years. If we can get five hundred or a thousand of those cases, and then get an equal number of children who have not been tonsillectomized, and make a comparison, you have information of real value as to what, in a large way, tonsillectomy does in preventing infections in children. That is an important field open to the work, it seems to me, of laryngologists.

SPINAL ANESTHESIA IN GENERAL AND GENITOURINARY SURGERY.*

GEORGE F. THOMPSON, M. D., AND JOHN S. NAGEL, M. D.

CHICAGO.

As an introductory remark I would state that my personal experience with spinal analgesia dates back about 10 years, and embraces approximately 1,000 cases. Stovain at first, then novocain, and for the past 8 months apothesine have been employed. Death could be attributed to the anesthetic agent in only one of my cases.

Spinal analgesia is not a new field but it is one in which much work is still to be done to determine its relative merits and its applicability to certain classes of cases in preference to general or local anesthesia. An American physician, J. L. Corning, was the first to experiment with spinal anesthesia and his findings were published in 1885 in the *New York Medical Journal*. He used 2 per cent. cocain solution and obtained anesthesia in both animals and man. He did no operations and did not even aim to inject the solution into the spinal canal, believing that if he introduced it into the nearby veins it would be carried into the cord but he must have placed it in the canal, otherwise the effects he noted would not have been so rapid and complete. His work did not stimulate any further researches and was soon forgotten until Quincke's description of lumbar puncture in 1891 led to the rediscovery of spinal analgesia and Bier used it on himself and the procedure was soon established more or less universally. Cocain was used exclusively in the early cases but the mortality was so high that the method dropped into disuse with the exception of certain clinics where efforts to improve the solution, the technic and the selection of cases continued until it was finally again placed on a stable basis.

Following the discarding of cocain, stovain was introduced by Fourneau and Tuffier in 1904 and is still in use. It has a greater paralyzing action on the motor nerves than any other agent and hence provides good muscular relaxation but is considered more dangerous for this same reason if it reaches and affects the respiratory nerves or centers. Novocain has been used but is not entirely satisfactory, while tropococain is the most

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popular at present and apothesine has only come into use during the past year or two.

The mechanics and physics of the action of the agent used depend upon certain features of the contents of the spinal canal and upon the curvatures of the bony framework. The cerebrospinal fluid has been supposed to move in and out of the canal, but while the pressure of the fluid certainly changes with position, it is doubtful how much of this is due to actual displacement of the fluid into the cranium from the spinal canal and vice versa.

If a fluid is introduced into the canal, of the same specific gravity as the spinal fluid, it will remain practically at the point of introduction, while a lighter fluid, if the patient is in the vertical position will ascend toward the head and a heavier one sink by gravity towards the lower end of the canal. If the patient is in the horizontal position the normal curves of the spine will influence the motion of the solution toward the head or the feet, depending upon the site of injection and the density of the solution. For example, the lumbar spine has a distinct anterior convexity and a heavy solution introduced at its most prominent point, about the interspace between the 3rd and 4th lumbar vertebrae, may gravitate either upward as far as the most posterior point of the dorsal convexity, approximately the 5th and 6th dorsal vertebrae, or downward into the sacral portion of the canal. If the patient is lying on one side or the other the heavier solution will accumulate along the dependent side as has also been demonstrated clinically in cases where the right lower limb has been rendered anesthetic while the patient was lying on that side while the left lower retained both sensation and motion. Hence the anesthetic solution will generally remain en masse at that area of the canal it reaches as the result of gravitation and will act upon the nerve tissues in that locality. Some diffusion of the solution along the canal for a considerable distance upward must occur however, judging from the frequent evidences of its action on the medullary centers even when the head and shoulders are kept considerably elevated. Since gravity so markedly influences the action of the anesthetic agent, solutions both lighter and heavier than the cerebrospinal fluid are used, depending upon the position the

patient is to assume for the completion of the operation.

The physiologic action of the agent on the functions of the body depend on the drug used and on the strength of the solution. Shortly after injection the analgesia becomes manifest, first in the genitalia, perineum and inner sides of the thighs and then proceeds upward a variable distance and downward to the toes. The interval between the injection and the establishment of a sufficient degree of analgesia to permit of operation varies from 3 minutes to half an hour or longer. Anesthesia is seldom complete, pain sense being abolished, but tactile and muscular senses are often only impaired. Paresis or paralysis is present and the reflexes disappear. The blood pressure is generally markedly lowered and the heart action slowed and weakened while respiration may also be affected and symptoms of syncope or even of collapse in certain cases may appear. Palor, sweating, nausea and vomiting are not infrequent. The low blood pressure is due to paralysis of the vasomotor and intercostal nerves and the lowered heart action to the slow filling up of the heart, the blood being in the dilated internal vessels. The action on respiration is due partly to paralysis of the intercostal nerves and partly to the lessened blood pressure interfering with the blood supply of the respiratory center. Peristalsis is markedly increased by spinal analgesia and distention of the intestine relieved thus facilitating operative maneuvers in the abdomen. Death, when it occurs, is probably due to the action of the drug on the efferent vasomotor fibers supplying the splanchnic area which allows of an enormous collection of blood in the large venous trunks so that the patient is practically bled to death by this accumulation of blood in the large veins. Paralysis of the respiratory and bulbar vaso-motor centers may also be fatal. The use of oil and gum arabic as a solvent for the anesthetic agent to allow of slow diffusion has been tried but has not been very successful. Making the solution heavy by the use of glucose so as to prevent too much diffusion has been the most successful expedient.

The solution used by me during the past 8 months has been apothesine in distilled water in the proportion of 1 grain to 1 c.c. approximately a 6 $\frac{2}{3}$ per cent. solution, which when further diluted with an equal amount of cerebrospinal

fluid makes a solution of between 3 and 3½ per cent. From 2 to 3 grains of the drug are used, depending upon the patient and the nature and duration of the operation. This solution is considerably heavier than cerebrospinal fluid and gravitates readily in the canal. About 200 operations have been performed with one death and two serious collapses with recovery. The list of operations performed includes amputations, varicose veins, neoplasms, arthrotomies, plastic operations, bunions, osteomyelitis, bone plastics, and aneurysms done on the lower extremities, hernias, varicoceles, hydroceles, amputations of the penis and hypospadias, one of which cases required operating for 2 hours; hemorrhoids, fistulae in ano, plastic operations on the vagina and perineum, dilatation and curettage which are about the most favorable types of cases as spinal analgesia gives complete relaxation and is free from the muscular spasm and straining so common with general anesthesia and the analgesia is easily obtained with low lumbar injections. Prostatic surgery is a favorable field, as Dr. Nagel will show, both on account of the usually poor physical condition of the subjects and the ease with which anesthesia is successfully induced. In abdominal surgery the perfect relaxation of the abdominal muscles and the absence of distention of the bowel make operative procedures easier and less manipulation of viscera necessary and post-operative gas pains are seldom severe or prolonged. Appendectomy, intestinal obstruction, and myomectomy have been successfully done several times, as well as gastro-enterostomy, epiploxy and operations on the bile passages. In intra-abdominal work pain is sometimes caused by traction on the viscera or mesentery and the use of gas for a few minutes has sometimes been necessary. Only one operation on the kidneys—a nephrectomy for tuberculosis, has been done and this was highly successful. The patient was a woman past 50 years of age, who was considered a poor risk for ether. One Caesaraen section was done for eclampsia.

Failure to obtain anesthesia after apparently successful injection occurs occasionally, in 9 per cent. of cases, according to Allen. There may be incomplete or unilateral analgesia, or it may be of too short duration or may be delayed. The causes of the failure may be explained by idiosyncrasy, or by errors in technic or possibly

by getting an admixture of blood in the spinal fluid.

The indications for the employment of the spinal analgesia may be stated as including all cases in which the lesion is below the diaphragm and in which the use of general anesthesia is contraindicated, such as the aged and debilitated, those with cardiac, vascular and kidney lesions, asthma, emphysema, chronic bronchitis and tuberculosis, diabetes, alcoholics, patients in shock not due to hemorrhage as for example in crushing injuries of the lower limbs and strangulated hernias.

Contra-indications are the presence of severe shock and hemorrhage where the blood pressure is already too low and cases where respiration may be too much embarrassed, e. g. marked emphysema, hydro- and pneumothorax, and empyema.

The dangers from the use of spinal analgesia are mainly the results of lowered blood pressure and the consequent effects on the bulbar centers, especially that of respiration. When the dose is injected into the canal it is irretrievable and its action cannot be controlled by withdrawal or by elimination. Lowering the head in order to direct more blood to the brain is not practicable because this allows the solution to gravitate toward the medulla and to further disturb the centers, while sitting the patient up to keep the solution away from the cranium may induce severe or fatal syncope, so that when the dose is too large or idiosyncrasy present a fatal ending is more immediate than with general anesthesia. The only solution is in the determination of the proper dose and the control of its diffusion by correct position before and after injection.

The mortality in my hands has been one in 1000. This case was that of a man past 50 years of age who was septic for several months from a chronic cystitis and pyelitis, and who had an enlarged prostate with 2 vesical calculi, a large inguinal hernia and an immense postoperative hernia into which the bladder projected, and a well-marked myocarditis. He was given 3 grains of apothesine in a 4 per cent. solution and very quickly went into collapse and died in 25 minutes, apparently from respiratory paralysis.

Various authors give the mortality as varying from 1 to 200 to 1 to 1,800, which is considerably higher than is usually ascribed to ether. How-

ever, there can be no question that there are numerous cases unsuited to general anesthesia and in which the fatal outcome is attributed to shock after ether that could be successfully done under spinal analgesia. In comparison with ether the after effects of spinal analgesia are scarcely worth mentioning. Patients who have had both will invariably vote for spinal injection. Headache, nausea, vomiting, vertigo and syncope occur only occasionally and are of short duration. Pain in the legs and back are not frequent nor prolonged. Albumin has been noted at times. Incontinence and retention of urine are rather frequent, especially the latter, and the catheter has to be resorted to quite often and sometimes for several days or even two weeks in one of my cases.

Nervous symptoms and ocular palsies have been described as sequelae, but I have never seen either. Autopsies have not revealed any marked changes in nerve tissue except in experimental cases where lethal doses were employed.

Compared with local anesthesia by infiltration and nerve blocking, spinal anesthesia is undoubtedly more dangerous, but it is much simpler of application, more certain in its effects, incurs less patience and mental effort on the part of both patient and operator, requires a much shorter time and less discomfort on the table, does not obscure the anatomy of the parts and is followed by much less pain and suffering.

Several years ago I began the use of local anesthetics in my genito-urinary work, mainly because a large amount of work of a surgical nature had to be done upon patients who were bad surgical risks. My work was directed more particularly along this line to the removal of the hypertrophied prostate gland. These cases are always poor surgical risks, and under a general anesthetic the mortality rate was high, the patient passing away at the end of the third or fourth day from a hypostatic pneumonia, or a combination of pneumonia and uremia. I used in these cases the prasaeral infiltration with results that were highly gratifying as the mortality rate dropped to a very low percentage, proving conclusively that the general anesthetic had much to do with the previous high death rate, as my technique was the same and the class of patients operated upon did not vary. In age they ran from 63 to 82 years. The anesthetic in all these cases

was novocain or apothesine. Several months ago in conjunction with Dr. George F. Thompson we began the use of spinal anesthesia with apothesine. I wish to merely record my experiences in the genito-urinary cases. A total of fourteen patients received spinal anesthesia with one death. Ten of these were prostatics and four carcinomas or carcinoma papillomas of the bladder. In all of the prostatics the final step of the operation under spinal anesthesia was not undertaken until at least one week after a suprapubic cystotomy had been done under local anesthesia using the infiltration method except in one case. This patient was in very good condition and a complete operation was done under spinal anesthesia. The one death which is here recorded was an individual who in every sense of the word was a poor surgical risk. The second step was undertaken ten days after the primary cystotomy and he succumbed one-half hour after the operation had been completed. This patient had long been a sufferer from prostatic obstruction, and was very much emaciated and septic.

In all these cases the anesthesia was complete and ideal from the standpoint of the patient and operator. G. G. Smith in the Year Book of Anesthesia states that 5 to 10 per cent of spinal anesthetics are not complete, part of which, however, he believes is due to faulty technique. Excepting the death as previously noted, no bad results in the other cases were observed. The pulse rate and respiration did not vary materially. It has been noted that in spinal anesthesia there is always a fall in blood pressure and the death here recorded I believe was due to this cause, the fall being too great a strain for a heart that was already struggling under changes in the heart muscle due to a myocarditis of long standing. In this case I believe the prasaeral infiltration would have had a greater percentage of safety for the patient. I believe that spinal anesthesia can be used or rather should be limited to the younger prostatic and individuals of advanced years with other bladder pathology, but whose circulatory apparatus has not undergone marked degenerative changes. The operator who is called upon to do genito-urinary surgery upon patients past the age of fifty-five years will find no one method of anesthesia ideal and suited to all cases. I have quite definitely abandoned general anesthesia in these cases, ex-

cept possibly in an occasional selected case. In parasacral infiltration and spinal anesthesia I believe I have two methods that will give these patients the greatest degree of safety using the spinal in the younger division and the parasacral in those cases of marked degenerative changes, in the circulatory system.

A GLANCE AT SOME OF THE OLD AND NEW THEORIES ON THE CAUSATION OF CANCER.*

J. RAWSON PENNINGTON, M. D., F. A. C. S.
CHICAGO.

It is not my intention to consider all the causes which have been invoked to explain the origin of malignant disease, merely to glance at a few—especially several by laymen. It would be a striking example of poetic justice if one of them was fortunate enough to light on the cause, as did Schaudinn for that of syphilis.

Ehrlich once stated that the cancer problem will be taken by assault, but Gaylord in his address before this very society, believes it will be broken up into a great field, requiring many years of patient work of many investigators. This was barely four years ago, and "many years of patient work by many investigators" had already been done, though it is rather discouraging to think that we are not much nearer the cause than in the days of humoral pathology. Indeed, Ewing doubts whether we shall ever have more than a descriptive knowledge of the ultimate nature of neoplastic overgrowth.

I shall begin with the parasitic theory which is by no means new; for as long ago as 1801, Adams (of England) attributed malignant disease to what he dubbed the "carcinomatous hydatid." Andrewes points out an insuperable objection to this theory. These growths are of limited inoculability. This would seem logically to involve for each species liable to cancer, a private and particular variety of parasite, incapable of producing cancer in any other sort of animal. "Such a view is incredible in face of the close resemblance between these growths in different vertebrates."

Both vegetable and animal parasites have been incriminated. Welsh remarks: "The resemblance between the invasion of a cancer and other

infective processes which had been compelled to yield the secret of their origin, fostered the expectation that the cause of cancer also would be found in some form of microbe." The enthusiasm excited by the discovery of the tubercle bacillus led to search for microbes in tumors also, and one of the most noted microbial causes in its day was Scheuerlen's bacillus, which proved to be a common variety, growing freely on sliced potato. I believe the latest claimant was the *Micrococcus neoformans* of the late E. Doyen of Paris, which, with its serum, is now solely of historic interest.

Several of the protozoa—those lowly organisms on the borderline between the vegetable and animal kingdoms—have been held responsible as well. So far back as 1891, bodies resembling microsporidia, one of the sub-classes of protozoa, were found in tumors and were likened by Pfeiffer, the authority on the protozoa, to *Plasmodiophora brassica*, belonging to the subclass, and living in the roots of cabbages, beets, etc. Somewhat recently (1905) Robertson and Wade, in England, claimed to have discovered this same organism in cancer and been able to grow it from fresh carcinomatous tissue.

The "golden-yellow organisms" of Max Schüller turned out to be cork-cells from the material used in mounting the specimens. This explains why he discovered them in sarcomas, likewise in carcinomas. Though myxosporidia, another subclass, are supposed to be found only in cold-blooded animals, the late Prof. Jaboulay of Lyons was confident at one time that they were the cause of tumors, cancerous and otherwise.

There is no need of enumerating all the alleged parasites, but some mention must be made of transmissible tumors which afford considerable evidence in support of this hypothesis.

In 1911 Rous announced the finding in the domestic fowl of a sarcoma transmissible by the filtrate. The original tumor was markedly malignant as proved by its structure and by producing extensive metastases. The filtrate made cell-free by passage through a filter produced similar tumors by inoculation, though they increased much slower than by direct implantation. It also gave rise to metastases. Rous suggested transmission is either by (a) some minute parasite or (b) chemical stimulus. Since then he has found others, all sarcomata.

At one time it was debated whether such transmissible or transplantable tumors were true neo-

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plasms or not, but Ewing decides they are malignant tumors with certain peculiarities impressed on them by the species. They have been observed in the mouse, rat, hare, dog, and chicken; and Jones has recently added the guinea pig.

I pass on to a consideration of "cancer-areas" and "cancer-houses," both urged in support of the parasitic theory, the argument being, of course, that the causal organism is resident in such areas and dwelling places.

Haviland, in 1875, plotting the cancer deaths of females in England and Wales, concluded that in these countries the highest mortality is found along the lower courses of rivers flowing through low-lying valleys and which overflow at high water. He elaborated on this a few years later, and instanced the Thames valley as a marked example. His original essay was promptly challenged by Hirsch, who in his celebrated work, stated it could not hold good generally; in Norway, for example, cancer is found principally at considerable elevations and in the mountainous districts.

Leamington in the County of Warwick (England) is on a small stream which empties into the river Stour. Mason, after investigating 400 cases there, thought the ultimate cause will prove contaminated by sewage, and that it gains access to be a germ, the habitat of which is a subsoil through one of the mucous orifices of the body.

Urquhart, several years ago, corroborated Haviland's conclusions as to the Thames valley: All the districts immediately bordering on the river show a rate above the average for the whole of England. As the high rate is uniform on both banks, it suggests there may be a connection between the floods in the river and the cancer incidence, though exactly what is not easy of explanation. Presuming that cancer is of parasitic origin, the drying vegetation left on the banks after floods may form a favorable soil for growth of the parasite.

Some further evidence on this point comes from far-off New Zealand. While the mortality in general is the lowest in the world, the percentage of cancer deaths increased from 64 per 100,000 living in 1898, to 73 in 1907, according to Hislop and Fenwick. The former had occasion to treat 31 cases, some 6 of whom lived in the same house though not blood relations. The area was a flat district lying between a snow-fed river and a

small stream, a large proportion being flooded every season.

Gordon and Thompson have recently furnished some negative evidence. Of the adjoining districts of Camelford and Launceston in the Duchy of Cornwall, the first has one of the lowest death rates in all England, and Launceston one of the highest in the southwest part of that country. They plotted all deaths during a 10-year period. Since it has been claimed: That cancer is relatively common in low clay levels along rivers which flood their banks, relatively uncommon on limestone, prone to occur among trees, and to recur in the same house—all these points were investigated. They found no special tendency to follow rivers, except as the houses follow them; nor any influence from the underlying rocks. Neither did they find any particular prevalence in wooded districts or single houses. On the other hand, they observed a marked tendency to "pockets" of cancer districts, though it is uncertain whether these are due to chance or not.

Bertillon also describes an enormous "cancer-area" which is referred to later on.

America is not to be outdone and is able to report "cancer-areas," as might be predicted in the older-settled portions of the country, where the conditions of living approximate those of Europe. An example is narrated by Tynes, from Fisherville, Pa. His practice averages about 265 families, and there were in 9 years 105 deaths, 18 or (17 per cent.) from cancer. Brookfield, N. Y., possibly the most celebrated "cancer-area" in the United States, with a population of 21½ times as much as Fisherville, had but 9.7 per cent. of deaths, nearly 9 per cent. less than in Fisherville. Neither heredity nor consanguinity were important factors.

Tynes gives further details of what he regards as the strongest evidence of the infectious character of cancer. In a city nearby, within six years there were ten deaths from malignant disease in a sharply defined area not much larger than a city block. In fact, five cases not only occurred in the same street and the same block, but in five adjacent houses, and the rest close by. Case 1, making 11 deaths in all, developed cancer 15 years before any of the others. She lived at the highest spot in the vicinity, and the drainage from her house was directly down grade and into five other houses in which cancer developed later. Only three persons were related, and they were

sisters and a son. Here also a history of heredity was lacking.

So much for "cancer-areas" as for "cancer-houses," while the occurrences about to be mentioned are probably fortuitous, they are striking nevertheless. In a hamlet in Shropshire (England) with 20 cottages, nine cases of cancer occurred in 15 years, according to Webb. Though none of the patients were blood relations, all the villagers used water from a roadside pump.

Power relates three deaths of domestics in the same dwelling: Miss B., aged 45, had lived in the house for 13 years and died from gastric carcinoma in 1884. Miss T., who had lived there for 20 years, at the age of 47, succeeded to the position held by Miss B., and occupied the same bedroom, she died the following year from cancer of the liver. Miss J., who had also resided in the same dwelling for 28 years, followed Misses B. and T., in the same bedroom, and succumbed to malignant growths in the breast and uterus in 1893. None of these women were related, and all appeared to be perfectly healthy when assuming the position.

During the discussion of Gordon and Thompson's paper, Ackerly said in Ashburton, in the southern part of Devon, he found an undue prevalence of cancer in the houses along a certain stream, in one three successive occupants, not blood relations, developed carcinoma. In Surbiton, in the County of Surrey, he knew of four instances where, in the previous 13 years, some eight or nine individuals long resident in the houses, succumbed to cancer. He suggested investigating the rats in such houses.

Another typical "cancer-house," and this time from Wales, is related by Simons. It is old, and so large it had sometime before been divided by a wall. Under this roof there were five deaths in 21 years, and but two were blood relations. This house is on the side of a stream, which, though often swollen by floods, is not sluggish, but the subsoil is often saturated.

An ingenious suggestion is made by Lazarus-Barlow, namely, that the greater frequency of cancer in certain houses or districts may be accounted for by the presence of some radio-active substance in the soil itself or the material of which houses are built.

The explanation offered by Rosenfeld for "cancer-houses" is that they are in poor repair, hence, patients, on account of their poverty, dwell in

them. Now not all such houses are dilapidated, for Chapman saw three cases in a fine mansion, standing in large grounds; while Fabre quotes a case from Mollière: In a well built house at Lyons, on the banks of the river Saone, there were four deaths from cancer in ten years, and none from any other cause.

We come now to a much-debated cause for malignant growths as well as many other conditions—heredity.

Probably the most marked instance of this alleged factor is the family alluded to by Broca. This, it will be remembered, concerned a mother and four daughters, all of whom died of cancer; and of 18 grandchildren, 11 succumbed to cancer. Whiteford, recording a case of "conjugal cancer," furnished another striking instance of family incidence: The wife's father, two brothers, three aunts, and two cousins, all died from cancer.

In 1890 Arnaudet claimed that cancer is much more frequent in Normandy than in Paris. A large committee (35 physicians) was formed, and after due investigation reported that while cancer was unduly prevalent in some remote villages, and which they believed due to in-breeding and heredity, still in Normandy, as a whole, it is no more frequent than elsewhere in France. This point is referred to later by Bertillon.

During 18 years, Warthin examined some 1,600 carcinomas, proved such by histologic examination. Complete records of four families were available, and the incidence in them is so striking, that according to him, it can be interpreted as showing an inherited susceptibility. He believes also there is a marked susceptibility in certain generations and family groups, associated with an equally marked susceptibility to tuberculosis, and with reduced fertility. In a family generation the occurrence of multiple carcinomas practically always means they have occurred in a preceding generation. Moreover, the family tendency is naturally more marked when carcinoma is found on both sides.

However, cancer is so widespread that there must be very few families whose near or distant relatives have not been affected. In fact, Snow, in 1,075 cases of malignant disease (including 57 sarcomas), found a history of cancer in the parents in 15.7 per cent. Yet of 78 individuals in perfect health the family incidence was 17 to 19 per cent.

Gneinatz obtained similar results; of 210 can-

cers, there was a history of heredity in 18, of 166 benign tumors, a cancerous heredity was given in 11; lastly, of 103 adults without tumors of any kind, there was cancerous heredity in 12. A series of 500 males with cancer of the tongue, etc., and 500 females with mammary cancer at the Middlesex Hospital, were investigated from this standpoint by Hill and Tritsch, and they found 14.6 per cent. of the males, and 7.8 per cent. of the females gave a family history of heredity.

Menetrier estimates that a history of heredity will be given by about 13 per cent. of all subjects with cancer. DeBovis states that the percentage of cancerous heredity in the Belgian, German and Dutch collections of statistics is 16, 6, 17 and 18.1, respectively. All the foregoing relate to cancer in general, visceral or otherwise, but for squamous-celled epitheliomas alone, Heurtaux, of 563 cases under his care, tells us there was a history of heredity in 10.75 per cent.

Before leaving this phase attention may be drawn to Miss Slye's researches on heredity in mice. Since these animals were living under artificial conditions, and since we know so little of life processes in such short-lived creatures, the findings, while interesting, should be accepted with some reservation when discussing cancer of human beings. After an experience with 5,000 individuals, the results show cancer to be hereditary in the strict sense. The common laboratory infections spread through a given cage as well as to adjacent cages, not so with cancer. When an infected mouse dies and is devoured, every mouse in the cage is liable to be carried off by the same infection; this never happens with cancer. Cancer differs so inevitably that it can be manipulated—can be put into a strain, can be extracted out, or can be bred out of a line one side of which carried 100 per cent. of cancer originally. Finally, cancer is not transmitted as such, but rather as prone to follow a given provocation, probably in the form of over-irritation.

The older authors looked upon cancer as the local manifestation of a constitutional disease, a view resurrected lately. Consequently, they proposed to treat it by systemic measures—witness mercury advised by Boerhaave early in the 18th century; and hemlock by Stork later on. Early in the last century, the days of indiscriminate bleeding for every disease in the nosology, venesection was used by Broussais, that "prince of bleeders," and others.

From this viewpoint it was but a step to attribute malignant tumors to various constitutional disturbances. Thus, in 1899, Behla gave as his opinion that cancer is a parasitic disease which may be propagated in like manner to malaria; both these affections bear some relation to damp and marshy conditions. (This, it will be noted, was after the malarial plasmodium was discovered.) The following year he enlarged on this view, stating that the water of stagnant ponds or ditches which have forests or undergrowth on their banks is suspicious, and such water, with great probability, may be regarded as the bearer of the germ. Where cancer is "endemic" it is advisable that only boiled water be used for drinking, for washing domestic utensils, or to water gardens. Since cancer may also be derived from vegetables, salads and raw vegetables must not be washed with water unless boiled.

Boiling the water as a prophylactic is also recommended in a pamphlet recently issued by a San Diego physician. He believes the disease is due to water-borne parasites, and recites the usual arguments. Hence douches convey the germ to the uterus, and so on, though the gynecologists tell us some women go through a long life without ever knowing what a vaginal douche is. The Japanese form a stumbling block to this theory, for the author admits they bathe excessively, yet are little subject. This is accounted for by the fact that only hot water is used for baths, etc.

As a matter of fact, the cancer mortality in Japan is as high as in several European countries. This theory should explain the infrequency among the Eskimos. The anecdote may be recalled of the individual of that race who was given a cantharides blister, which had no effect, for it did not penetrate the various strata of dirt, and never reached the skin.

In 1901 Löffler proposed to treat cancer with injections of blood from malarial patients, as malaria and cancer are mutually antagonistic. Malaria is most prevalent in the tropics, and as it gradually lessens towards the poles, cancer increases, due to the fact that the natives in tropical countries have at some time in life been affected with paludal infections of severe type.

Coming from the co-discoverer of the diphtheria bacillus this is surprising. One of the most malaria-infected spots on the globe is Italy, especially the notorious Campagna outside Rome;

yet as Bertillon, also DeBovis, show, cancer is rare.

Kieffer, after extensive investigations in Cuba, comes to the conclusion there is no real antagonism between malaria and cancer, and that the course of malignant disease is not modified by the occurrence of malarial infection in cancerous subjects. He has had a varied experience in the tropics, and finds malignant disease relatively less frequent than in colder climates, though in this respect countries differ greatly.

One more systemic disease which has been thought to have some etiologic influence is rheumatism. Hislop and Fenwick in their paper already cited, point out: "So many of the cases were rheumatic, and rheumatism was so prevalent in subacute or chronic forms in bush districts, that we can hardly ascribe the coincidence of rheumatism and cancer to an accident." They likewise suggest: "It is not impossible to imagine that the circulation of the blood in rheumatic cases may act as a direct irritant to tissues." Bell also claims individuals with a tendency to rheumatism are more liable to cancer of the mucosa: he naturally advocates a non-operative treatment.

The dictum of Rokitansky, that cancer and tuberculosis are inimical to each other, has proved to be unfounded, cases of each in the same subject being placed on record from time to time, though—to be sure—the association is not very frequent. While Landis states that of 633 necropsies at the Henry Phipps Institute, a very small percent not being tuberculous, but one carcinoma was found in 15 years, and that in a patient free from tuberculosis; other institutions give a much larger proportion. Thus Lubarsch, in 6,536 cases, found 4.4 per cent. of tuberculous individuals were affected with cancer; on the other hand, 20.6 per cent. of cancerous subjects had tuberculosis. Bang, in a series of 6,000 necropsies on tuberculous individuals, found 16 per cent. of these had cancer as well; and Boinet in 800 necropsies, discovered cancer in 35, in 11 of which pulmonary lesions were present.

These figures are for the purpose of introducing the theory of McConkey, who states that the older writers noticed the striking analogy between cancer and tuberculosis. Since 1882, no one seems to have suspected the tubercle bacillus. As a result of several months' investigation founded on this hypothesis, he is convinced this organism is the cause of cancer by reason of its

well-known effect of causing cell proliferation. In young and robust subjects, such proliferation is checked, as a rule, by an exudate of lymph as well as lymph cells, which surrounds the new growth—and we have a tubercle. But in subjects whose reaction is not sufficient to hedge it in, a cancer is the result.

Syphilis, another member of the infective granulomata, has been incriminated by Curtis who writes that in the early 90's, among the patients treated for cancer, he discovered some with a symptom which he had demonstrated to be a clinical sign of syphilis, *e. g.*, the egg-skin eschar of the mouth and other mucosæ. He is warranted in the conclusion syphilis is the real cause, because in the succeeding 18 years he had found clinical evidences of syphilis in the majority of his cancer cases, and because antisiphilitic treatment improved all cases and even cured some when seen early.

Long ago Turenne advocated counteracting the virus of carcinoma by inoculation with syphilis, and I believe even carried it out.

Within the last few months DePury has given an interesting account of his experiences in Africa. In 1830 his grandfather emigrated to South Africa as a missionary among the Basutos, a tribe of Zulus, living near what was afterward the southern part of the Orange Free State. His father became a medical missionary, and in due time DePury himself, 50 years after his grandfather's arrival. In the meantime the habits of the natives had undergone great changes. The communal system with polygamy, had given way to monogamy through the efforts of the missionaries. Moreover, the discovery of the gold mines, with an influx of adventurers from all parts of the globe led to the introduction of syphilis, which was rapidly spread by the young men of the tribe who worked at the mines long enough to get a start in life.

Our author who saw several thousand patients in a year in his dispensary, was soon struck with the absence of malignant disease among the natives, though occurring in Europeans, and mentioned this to his father. The latter replied: "There is no cancer among the Basutos, I have been searching for it in vain for 25 years." At length DuPury saw adenocarcinoma and those rapidly-developing neoplasms which affect principally young individuals with hereditary or acquired syphilis.

A few months after the Boer War, he visited the hospitals in his vicinity, and the testimony was unanimous that while syphilis was diminishing in intensity probably on account of the total syphilization of the race, carcinoma was becoming, more and more common. Moreover, among the Basutos cancer affects principally individuals from 30 to 40, rarely those over 50. The most common forms were the glandular type—adenocarcinoma of the liver, of the bones, and of the large lymph-nodes. Thus in less than half a century an admirably healthy tribe, of magnificent physique, with almost patriarchal customs, as a result of European influence, acquired first syphilis, then cancer, and lastly tuberculosis. A fine example, he remarks sarcastically, of the benefits of civilization.

The author, at time of his paper, was in charge of a French military hospital, and quotes Jaboulay, who asserted that any patient developing cancer before the age of 28 was syphilitic. He then had under his care an officer who showed the close relation between syphilis and cancer. The great-grandfather was syphilitic, and died at the age of 58 from cancer of the stomach. His wife, probably infected by him, also died from cancer at the same age. The grandfather, likewise syphilitic, died at 58 from lingual carcinoma, and the grandmother, from cancer of the breast at almost the same age. Thus 58 years was generally the fatal age, though the father is now 60. He likewise is syphilitic, obese (242 lbs.), and diabetic. The officer himself was syphilitic, entirely bald at 33. The father from whom the genealogic details were gleaned, stated other members of the family died from cancer, and pithily observed: "With us everybody is either cancerous or syphilitic."

DePury firmly believes not only that syphilis favors the development of cancer, but that the hereditary form is the fitting soil, admirably prepared and predestined—so to say—to a fatal cancerous degeneration. In conclusion, he remarks it is curious that of the three great plagues which in Europe since the 16th century seem to follow and complement and serve as lures for one another, two should be of parasitic origin, the other not.

If there is any foundation for the theory of the syphilitic causation, striking confirmation should be had from the Pacific Islands which have been a hotbed of syphilis for considerably over 100

years, as a result of the visits of whaling vessels. Both negative and affirmative evidence is to be had: Kieffer quotes Robertson as stating that cancerous disease is fairly prevalent in the Gilbert Islands, the inhabitants of which are darker than the Polynesians. At Fiji, the admissions to the Colonial Hospital for cancer in 5 years numbered four for native Fijians, and one for Polynesians; 1.3 and 1.2 per 1,000 admissions, respectively (Hoffman). The Fijians also are much darker than the Polynesians. At Tahiti, of 61 major operations in two years, according to Ortholan, there was but one for malignant disease, and that was a sarcoma; though in the Low Archipelago, not far away, of five deaths two were from cancer of the liver and of the uterus.

In China, too, Jeffreys and Maxwell state syphilis is met with from one end of the country to the other. Yet cancer is not unduly frequent. Of 34,197 new cases in the Tung Kuan Hospital, the percentage of malignant disease was only 0.5. While they operated on many cases, this is not to be wondered at considering the density of the population there. At any rate, cancer of the alimentary tract from the cardiac end of stomach to the last inches of colon, in their experience, is extraordinarily rare.

Kellert records a veritable pathologic museum in a woman, aged 39, syphilis, tuberculosis and cancer. It was thought the first was possibly congenital, the tuberculosis comparatively recent, and the cancer (of the pharynx) probably the last to appear.

Before taking up the final section, I propose to notice some more or less startling theories advanced by professionals as well as laymen:

It is just about half a century since Moore claimed cancer is more common in the first born, though pediatricians tell us the death rate from these in infancy is unusually high, owing to the inexperience of the mothers.

Professor Senn states in his work on tumors: While mental anxiety may favor the origin of carcinoma by impairing nutrition and thus impairing the physiological resistance of the tissues, we have no evidence that nervous influences exert a more direct effect. "It is different with dread or fear of carcinoma," he adds. "The writer recollects two patients who for no tangible reason were in constant dread of the disease for many years, when finally their fears were realized. Apprehensions of this nature must certainly exert

a positive influence on the etiology of carcinoma" (p. 236). The influence of mind on matter, indeed!

A French author, Noël, finds certain contagious tumor-like growths are often to be found on the trees in districts with undue prevalence of cancer. He even thinks there is some etiologic relation between these tree "cancers" and the same tumors in man, for the latter are common in persons living in or near woods. Insects have a special preference for the tree "cancers," and carry infection not only from tree to tree, but also propagate it through orchards in food for human beings. Mankind may be thus infected; and when the virus enters by the mouth, the resulting lesions are in the alimentary tract; the external parts, on the other hand, are involved by direct or contact infection. This theory would hardly account for uterine carcinoma. Moreover, he seems to refer to the galls on oaks and other trees; if so, they result from eggs laid by gall-flies, the resulting swelling serving as food for the larvæ.

Stuart-Dow, a laryngologist, is responsible for a novel theory. Sufficiently impaired function of the thyroid leads to the tissues being waterlogged, so to speak, with mucin, and the establishment of myxedema. As he has never observed cancer and myxedema at the same time, he suggests an excess of mucin in the tissues may insure against both carcinoma and sarcoma. With thyroid overwork, there must be a lessening of the normal quantity of mucin, both in the tissues and on the surfaces, and he believes this "hypomyxia" is the true precancerous condition.

Bashford quotes a "distinguished surgeon" as anathematizing the bedclothes and the discharges from cancer patients as dangerous sources of infection.

The first production by a layman to be considered is that of the embryologist Beard (of Edinburgh) who is a doctor, though of science, not medicine. His theory, which in his latest work he informs us was first announced for cancer in 1902, and for sarcoma in 1904—is that the "irresponsible trophoblast," as he is fond of terming it—is a sort of pathologic I. W. W., and runs wild like an opium-crazed Malay. The best way is to let him state his own case:

"At the critical period, the embryo, complete in all its parts, begins to nourish itself by an alkaline pancreatic digestion, and with a ferment

known as trypsin. If this latter be wanting, the asexual generation, the trophoblast, may become a malignant tumor of the deadliest description; in its presence it becomes harmless and slowly degenerates. Clearly, then, since cancer is an irresponsible trophoblast, the ferment which brings about the degeneration of this in normal development ought to possess potency when directed against the cells of a malignant tumor." (p. 118).

While it must be confessed the development of chorioepithelioma appears to uphold his views, it seems strange that the pancreas which is to protect the body by secreting trypsin, should itself be attacked. As for the corollary of this theory, the trypsin treatment, Bainbridge gave it a thorough trial at the Skin and Cancer Hospital (N. Y.), and states emphatically it *does not* cure cancer.

It is amusing to note how the doubts which beset the profession as to the etiology of certain diseases are airily brushed aside by laymen. Thus Russell takes us into his confidence long enough to impart the following:

"All countries or parts of countries which use much flesh, beer, tea, coffee, etc., have an increase of cancer. Every country not using these or other irritating substances in excess have little or no cancer. . . . Rheumatism and heart weakness are favorable to the growth of cancer, and these maladies are largely produced by excess of food, and of toxins, such as tea, coffee, alcohol, beer, etc." (p. 3).

He seems to attribute about equal importance to the influence of "toxins," as he calls them, and that of ingesting food at too high a temperature. In this connection he made some observations and discovered that the temperature of porridge was 163 degrees, that of rice 168-176 degrees, and liquids as well as solids are habitually swallowed at 120-170 degrees, quite unbearable for the skin.

This recalls the observation of a medical missionary in China, Maxwell, I believe, that cancer of the esophagus and mouth is quite common there among the men, owing, he believes, to eating rice while quite hot; on the other hand, the women who eat later, after the rice is cool or even cold, are but seldom affected.

Green of Edinburgh, describes himself as a "former student of medicine." A few years ago he published some papers which now appear in a booklet. In these he claimed cancer is due to

some product formed during the burning of coal. He first took up Nairnshire, a county in the north of Scotland, which has the highest death rate in the country in the rural districts, while the town rate is normal. Of the four registration districts the cancer deaths were: 57, 13, 15 and 1, respectively. This last was a rodent ulcer, in a patient aged 81. The reason for the low rate he believes to be that only peat is burned. He claims malignant disease is unknown in Greenland where only oil is burned, but this is not quite accurate, as will be seen.

Later he checked his results by similar investigations in the Orkney Islands. Here the fuel is either peat or coal or a mixture, since there are no forests. Now in the districts where peat only is burned, cancer accounts for one death in 42; where coal alone is used, the proportion is 1.9. However, he found three districts where the death rate was very high though peat was the universal fuel. These results seemed unaccountable until the peat was analyzed, when—though it is supposed to contain no sulphur—it actually showed almost 1 per cent., considerably more than in many specimens of coal.

Green believes cancer production hinges on the sulphur in the fuel. Sulphur dioxid must be given off when sulphur is burned, and it is some compound of the dioxid which sets up cancer.

(In this connection, though not exactly germane, it may be recalled many years ago Law Webb proved that coal miners in England are practically immune to cancer.)

The last layman whom we shall quote, as well as the latest for his booklet appeared in 1917, is Lt. Col. Hildebrand, late of the Indian army. It is well known that retired Indian officials are peppery and our author is no exception, for failing to have his theories accepted by the profession, they should be "carefully sifted by a Royal Commission composed of judges, directors of life insurance companies. I would suggest that no doctors or so-called experts be allowed to be members of the Royal Commission." His views are that cancer is caused by drinking unboiled and hard water, which in due time hardens the lining of the alimentary tract. Given this fibrous tissue, cancer may occur if radium lodges in it. The radium in turn is derived either from the rocks whence the hard water is obtained, from lead pipes, or the corroded surfaces of boilers, etc.

Lead is believed to be one of the end-products

of radium, not its source. The Colonel is by no means niggard with his theories, for another one is that bread made with yeast from fermenting spirit renders the individual bad-tempered, though if made from brewer's yeast, it soothes them.

I have left the large subject of diet mostly to the last because the vagaries of some of its proponents can be better understood by what has gone before, and because this theory carries with it some subtheories which cannot be very well considered apart.

So far as diet is concerned, is it some excess as a whole, or of some particular article of food, or of some adjuvant or condiment? Here there is a decided discrepancy of opinion.

The investigation on apparently the largest scale was carried out in 1911 by Bertillon, the celebrated chief of the Paris Bureau of Municipal Statistics. He drew up a map of France, with two squares, each about one-third of the whole country, one which embraces practically all of northern France, had a death-rate two, three or four times higher than the other on the south. The first much resembles the map showing the greatest consumption of alcohol, though Brittany, which is notorious for excessive consumption, is outside. He also points out that, generally speaking, countries bordering on the Mediterranean have only half as many cancer deaths as those further north (Denmark, Holland, etc.).

Bertillon remarks that with so sharply marked a geographic distribution there must be a cause, a single one and which preponderates over the others, but this he was unable to discover. In Paris, the increase in mortality is only in cancer of the stomach and rectum. Cancer of the mouth and breast have not increased. Those of the female genital organs are even diminishing.

Therefore, the causes are special to the digestive tract (except the mouth). Is there some article of diet more used now than formerly which causes the increase? Is it this food which affects the country in the north more than the remainder? Is it meat, and, if so, some particular kind? More meat is eaten at present and more in the north and the south of France. He tabulated the cancer frequency for a decade in 47 towns and the amount of meat consumed, and found that of 16 using little meat and having but few deaths, only two are within the fatal square.

The lower death rate among Jews has been at-

tributed by Fishberg to some peculiarity in their ritual laws on diet. As regards the non-use of pork, cancer, with the exception of carcinoma of the penis, is frequent among Mohammedans, who also abstain from pork. This exception is generally agreed to be due to circumcision. The Imperial Cancer Research Institute collected a number of examples among the Arabs at Khartoum.

While the Jewish race is less subject to cancer, it is by no means exempt. The late Sir. B. W. Richardson, of London, said he had noticed it comparatively frequently among his well-to-do Jewish patients. Bainbridge also states he has operated on many cases, and refers to a specific instance, but a sarcoma. Theilhaber, at the International Cancer Conference, reported that cancer is relatively frequent among the Jews in Munich, though carcinoma of the uterus is decidedly uncommon.

Kalgouf has even recorded what may well be termed a cancer "epidemic." In a small town with 1,500 inhabitants, 600 Gentiles, within a year he treated eight cases, seven in Jews, and but two with a history of heredity. During the previous 12 years he had not seen more than seven or eight cases altogether.

Bosc, of the University of Montpellier, France, has considered the influence of diet from a different point of view. In 1898 he stated that he believed cancer was due to protozoa, and five years later that affections supposed to be due to ultra-microscopic causes are, as a matter of fact, produced by protozoa. As the result of investigation of an enormous number of cancers, he claims in his latest paper (five years ago) to have found protozoa in all, but in different stages of development.

The prevalence of cancer is accounted for in his opinion by the widespread of protozoa in Nature. The sporulating (or resisting) forms are excreted in the feces of insects, and of most of the animals, both cold- and warm-blooded, associated with human beings or used as food. If dust laden with the feces of any animal serving as a host becomes lodged on the lips, or if one crushes an insect on the skin, a portal is opened for protozoa. Thus he continues, the gastrointestinal tract is prone to constant traumata, especially since fish, mollusks, etc., used for food have hard parts which serve both as a vulnerating agent and as a mode of infection. He accounts for the great frequency of cancer in the alimen-

tary tract by the use of raw or partly cooked vegetables and fruit, fish or flesh. In some parts of South America, *e. g.*, Uruguay and Argentine, cancers of the esophagus, stomach and intestine are extremely prevalent, claimed to be due to an excessive flesh diet.

After his pronunciamento, already quoted, Russell apparently has some misgivings, for he adds: "Flesh eating in itself, apart from excess or common adjuncts, is certainly not a large contributing cause, for the very moderate flesh-eating peasantry of Normandy, Norway Switzerland, South Australia, etc., have about the highest rates of all" (p. 163).

For many years, Bulkley, the well-known dermatologist, has been of the opinion that eating of meat produces cancer, and states he has treated both primary and recurrent cases by strict vegetarian diet with—so he claims—remarkable results. He likens carcinoma to psoriasis, which is characterized by epithelial prolongations into the corium quite comparable to the ingrowing masses of cells met with in the early stage of cancer. Again, cases of epithelioma developing from psoriasis are seen not infrequently. He has placed a number of cases on record where the lesions have disappeared entirely without any medical measures whatever, merely a strict vegetarian diet. In a somewhat extended tour of the Far East, during which hospitals in Japan, China and the Philippines were visited, with a total of many thousand patients, he was told "cancer was rarely seen among vegetarian peoples."

Nevertheless, cancer is not rare in Japan by any means—60 per 100,000 population; and as for the Philippines—or at least Manila—Dudley states that of 4,284 admissions to St. Paul's Hospital, 48 were for carcinoma, and 17 for sarcoma, while 27 cases of carcinoma and eight of sarcoma were inoperable. The total deaths in the city for a year were 7,613, of these 64 being due to cancer. Kieffer also states cancer is not uncommonly rare in the Philippines.

Bell, about the same time as Bulkley, advised a diet of uncooked food, nuts, and vegetables, with complete avoidance of meat.

One of the earliest advocates of the meat theory was the late Sir W. M. Banks, of Liverpool, in a discussion some 25 years ago.

Hoffman remarks if meat-eating, as such, were a definite cause of cancer frequency, the disease should be exceptionally common among tribes of

our Indians, who, to an unusual extent, live upon a meat diet. Yet of 886 deaths reported to the Census Bureau, only nine (1.02 per cent.) were from malignant tumors.

Another race which should be ravaged by cancer, on the meat hypothesis, is the Eskimo. Travelers tell us that practically the only vegetable food they obtain is from the partly-digested remains in the stomachs of muskox and reindeer, with some scanty supplies of scurvy-grass, and so on. Yet they seem immune, though a few deaths are reported by the Danish official physicians stationed in Greenland for many years past. Meldorf, for example, states that of 15,000 patients less than one per cent. had tumors, only a few of these being malignant.

The increasing prevalence of renal calculi in Switzerland has been attributed to diet also by Lardy, and while this topic is foreign to our subject, his opinions may be briefly referred to as showing the extreme views often held. After residing in Turkey for many years, he was struck on his return to Switzerland by the greatly increased frequency of kidney stones, and suggested this was caused by the much freer use of mutton. In 1880, about 1,650 tons were eaten, while in 1911 (the date of his paper), the amount had grown to nearly 8,000 tons. He claims that in other countries, such as Turkey in Asia, Russia, Hungary and England, where there are many calculi, the inhabitants also consume large quantities of mutton.

Ochsner, however, observes that India and China are two countries where stone is most common. India probably has the most cases, and an English author remarks, "one might build walls of calculi." Yet the Hindus are vegetarians, as are the Chinese. The frequency in England is confined principally to the eastern counties where it is supposed to be due to the hard limestone water.

In the English colony of Sierra Leone (West Coast of Africa), Renner finds the number of cancers, especially of the breast, increasing among the "creoles" or descendants of liberated slaves, due, he believes, to indulging in preserved and imported foreign fruits, sweetmeats, etc.; but absent or rare in the aborigines who live on their primitive food.

It is a disturbance of the potassium balance of the body which is responsible, so Ross claims.

The spread of cancer is caused by the growing deficiency of potassium in our food and drink.

One of our common condiments is to blame, according to Robinson, who in his somewhat recent article gives figures to prove that the cause is to be found in the constitution of the blood plasma as evidenced by the frequency with which such organs as have a free blood supply are affected. The improvement, as a result of vegetarian diet, is due to the absence of common salt. Meat must be salted more than is normally found in the flesh of the animal, though meat contains a much higher percentage than ordinary vegetables. Salt must ultimately find its way into the plasma, increasing its saline content to a higher degree than the one in which the cells were intended to live normally. To produce cancer, the subject must have inherited an antipathy to chlorin, which he terms "chlorism," and likens to bromism and iodism, of the same chemical group as chlorin. The hereditary tendency may lie in transmitting this antipathy.

Robinson revives Braithwait's theory of 1901-2, which was that there are four factors originating the disease. Salt is the essential one, but without one and generally two more, does not operate; the others being excessive feeding (especially meat), senility of the cells, and local irritation. All four of these may be present. The freedom of Jews is due to their not eating bacon. Cancer houses prevail where there is room to keep a pig and the habitants eat bacon, and so on.

At the Cancer Conference, Schöne of Marburg, also stated sodium chlorid in large quantities seems to favor the proliferation of tumors.

According to Hewlett, on the other hand, the death rate among sailors and fishermen who use large quantities of salted provisions, is only 60 and 46 per 1,000, respectively. Moreover, many of us can remember when salt meat formed a large proportion of the diet in rural communities. This is largely a thing of the past, indeed, in the last 30 or 40 years, the facilities for obtaining fresh meat have already lessened the usual consumption of salt meat, yet cancer is increasing by leaps and bounds.

Of course, alcohol too has been dragged in, the late J. F. Payne alleging this as a factor in 1899. If we remember correctly, he was the medical referee for a temperance life insurance company. Any attack on his habits of eating and drinking perturbs the wellfed Englishman, and we are not

surprised at the following utterance from Mr. Owen:

"In these days when well-meaning, but over-zealous persons are forever telling us that the chief part of our illnesses are brought on by our misdeeds, and especially by a moderate indulgence in what they are pleased to call 'alcoholic beverages,' it is somewhat of a comfort to find that the trout and the carp, undoubted water-drinkers are, with the rest of us, liable to cancer."

In fact, Heron of the Galton Institute, London, actually found cancer less common among inebriates than in the population at large.

Such are a few of the many theories to account for this fell disease. Some are absurd, others ridiculous; more than one are diametrically opposed to each other, yet several seem to contain a figment of truth. Some facts can be found to substantiate the parasitic theory, others as the famous "Kangri burns" of Kashmir, negative it. This leads me to ask if there is only one cause after all. As Rohdenburg and Bullock observe, the wide distribution of tumors in Nature speaks for the possibility they are dependent on general biologic phenomena, as opposed to some specific causal agent.

Cancers have been found in the warm-blooded animals and birds, in the cold-blooded reptiles, amphibians and fishes, and—according to Bashford—even the lowly oyster has been found to harbor a tumor. I believe it is evident that the same cause for malignant tumors in man must also hold good for similar growths in other vertebrates.

No. 31 North State Street.

REFERENCES.

- Ackerly, R.: *British Med. J.*, Aug. 30, 1913.
 Andrewes, F. W.: (In "System of Medicine," Allbutt-Rolleston. London, 1905, i 627.)
 Arnaudet: *Normandie Méd.*, 1890, iv, 33.
 Auzias-Turenne, J. A.: "La Syphilization," Paris, 1878.
 Bainbridge, W. S.: "The Cancer Problem," New York, 1915.
 Bang: (Quoted by Lapeyre.)
 Bashford, E. F.: *British Med. J.*, Dec. 9, 1905.
 Beard, John: "The Enzyme Treatment of Cancer and Its Scientific Basis," London, 1911.
 Bchla, R.: *Ztsch. f. Hygiene*, 1899, xxii, 123.
 Idem.: *Deutsch. med. Woch.*, 1900, No. 45.
 Bell, Robert: "Cancer, Its Cause and Treatment Without Operation," London, 1913 (p. 49).
 Bertillon, Jacques: *Presse Méd.*, May 13, 1911.
 Boinet: (Quoted by Lapeyre.)
 Bosc, F. J.: *Presse Méd.*, Nov. 26, 1913.
 Braithwait, James: *British Med. J.*, Sept. 20, 1902.
 Broca, Paul: "Traité des Tumeurs," Paris, 1866-9.
 Bulkley, L. D.: *Med. Record*, Oct. 24, 1914.
 Chapman: *British Med. J.*, 1894, i, 1302.
 Curtis, G. L.: *Med. Record*, July 4, 1908.
 DeBovis, R.: *Semaine Méd.*, Sept. 24, 1902.
 DePury, G. A. C.: *Paris Méd.*, Jan. 19, 1918.
 Dudley, F. W.: *Jour. A. M. A.*, May 23, 1908.
 Ewing, James: *J. Cancer Research*, January, 1916.
 Fabre, J.: "De La Contagion du Cancer," (Thèse de Lyon, 1892.)
 Fishberg, Maurice: "The Jews," New York, 1911.
 Gaylord, H. R.: *Jour. A. M. A.*, March 20, 1915.
 Gincinatz: (Quoted by Menetrier.)

- Gordon and Thompson: *British Med. J.*, Aug. 30, 1913.
 Green, C. E.: *Edinburgh Med. J.*, Oct., 1912, August, 1913.
 Haviland, Alfred: "Geography of Heart Disease, Cancer and Phthisis," London, 1875.
 Idem.: "The Geographical Distribution of Disease in Great Britain," 2d Edition. London, 1892.
 Heron: (Quoted by Hoffman.)
 Heurtaux, A.: *Arch. Provinciales de Chir.*, Feb., Mar., 1903.
 Hewlett, R. T.: *Lancet*, Mar. 22, Apr. 5, 1902.
 Hildebrand, W. H.: "The Causes, Prevention, and Treatment of Cancer and Other Diseases," London, 1917.
 Hill and Tritsch: *Arch. Middlesex Hosp. (Cancer Research Lab.)*, 1902, ii, 104.
 Hirsch, August: "Handbook of Geographical and Historical Pathology," London: (New Sydenham Society), 1884-6.
 Hislop and Fenwick: *British Med. J.*, Oct. 23, 1909.
 Hoffman, F. L.: "The Mortality from Cancer Throughout the World," Newark, N. J., 1915.
 Jaboulay, L.: *Lyon Méd.*, Sept. 17, 1905.
 Jones, F. S.: *J. of Experimental Med.*, February, 1916.
 Kalgouf, E.: *Semaine Méd.*, Aug. 26, 1908.
 Keiffer, C. L.: *Med. Record*, April 27, 1907.
 Kellert, E.: *Jour. A. M. A.*, Nov. 21, 1914.
 Landis, H. M.: (Quoted by Hoffman.)
 Lapeyre, N.: *Presse Méd.*, April 11, 1914.
 Lardy, E.: *Corr. Bl. f. Schw. Aerzte*, May 1, 1911, p. 453.
 Lazarus-Barlow, W. S.: *British Med. J.*, June 26, 1910.
 Löffler, F.: *Deutsch. med. Woch.*, Oct. 17, 1901.
 Lubarsch: (Quoted by Lapeyre.)
 McConkey, T. G.: *New York Med. J.*, Dec. 19, 1908.
 Mason: *British Med. J.*, Jan. 18, 1902.
 Meldorf, G.: *Nord. med. Arkiv.* (Quoted in *Jour. A. M. A.*, March 21, 1908.)
 Menetrier, P.: "Le Cancer." (In "Traité de Médecine et de Thérapeutique," Gilbert-Thoinot. Fascic. 13. Paris, 1913.)
 Moore, C. H.: *British Med. J.*, xxviii, 1865.
 Noel, L.: *Rev. des Mal. Cancreuses*, 11, 1896-7, p. 137.
 Ochsner, A. J.: "General Surgery," (Practical Med. Ser., 1918, ii, 540.)
 Ortholan, M.: *Presse Méd.*, June 26, 1909.
 Owen, Edmund: *British Med. J.*, Dec. 15, 1906.
 Payne, J. F.: *Lancet*, Sept. 16, 1899.
 Pfeiffer, R.: "Die Protozoen als Krankheitserreger," Jena., 1891.
 Power, D'Arcy: *British Med. J.*, 1894, i, 1240.
 Renner, W.: *Ibid.*, Sept. 3, 1910.
 Richardson Sir B. W.: (Quoted by Williams.)
 Robertson and Wade: *Lancet*, Jan. 28, 1905.
 Robinson, E. P.: *Med. Record*, Sept. 1, 1917.
 Rohdenburg and Bullock: *New York Med. J.*, Aug. 3, 1912.
 Rosenfeld, S.: *Wiener klin. Woch.*, Sept. 11, 13, 1913.
 Ross, F. W. Forbes: "Cancer," London, 1912.
 Rous, Peyton: *J. of Experimental Med.*, April, 1911.
 Russell, Rollo: "Preventable Cancer," London, 1912.
 Scheuerlen, Deutsch. med. Woch., 1887, p. 1033.
 Schöne, G.: *Presse Méd.*, Oct. 5, 12, 22, 29, 1910.
 Schüller, Max: *Ctrb. f. Bakteriologie*, xxvii, 1900: p. 511.
 Senn, Nicholas: "The Pathology and Surgical Treatment of Tumors," Philadelphia, 1895.
 Simons, R. J.: *British Med. J.*, Jan. 30, 1908.
 Slye, Maude: *Interstate Med. J.*, July, 1915.
 Snow, Herbert L.: "Clinical Notes on Cancer," etc., London, 1883.
 Stuart-Dow, W.: *Lancet*, Oct. 16, 1909.
 Theilhaber, F.: *Presse Méd.*, Oct. 5, 12, 22, 29, 1910.
 Tynes, A. L.: *Jour. A. M. A.*, March 21, 1908.
 Urquhart, A.: *British Med. J.*, April 4, 1904.
 Warthin, A. S.: *Jour. A. M. A.*, Nov. 29, 1913.
 Webb, T. Law: *Birmingham Med. Rev.*, 1892, p. 342.
 Welsh, D. A.: *Scottish Med. and Surg. J.*, June, 1906.
 Whiteford, C. H.: *British Med. J.*, 1910, i, 1411.
 Williams, W. R.: "The Natural History of Cancer," New York, 1908.

TUBERCULIN TREATMENT OF TUBERCULOSIS IN CHILDREN.*

ERNEST LACKNER, M. D.

Sarah Morris Memorial Hospital for Children
CHICAGO.

The facts established in the last twenty years as regards the course of tuberculosis in children have shown that children are gradually immunized unless the infection is too severe or too continuous. In many cases the bacteria are interned in glands and bones, rendering them localized for the time being.

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It is difficult to determine in what manner the so-called cures have taken place. Did the tuberculin that the tubercle bacilli distributed have anything to do with it? It is difficult to estimate the effects of tuberculin. In order to do this many cases under treatment will have to be carefully watched and an accurate clinical record kept of each one. We must also have control cases so as to be sure of our results. I have wondered what became of these many children that re-act to tuberculin tests and show but slight objective signs of the disease.

There have been but few changes in the therapeutic aspect in tuberculin treatment since Robert Koch's announcement. Robert Koch makes a distinction between primary and re-infections. The efficacy of tuberculin on tuberculous processes as a whole and its action on local tuberculous conditions are still as stated by Robert Koch.

Tuberculin Treatment in Children. As we all know, Koch was influenced in his use of tuberculin in the treatment of tuberculosis by his success in producing the healing tendencies which are manifested in cases of spontaneous recovery, evidently caused by resorption of certain material obtained from the tubercle bacilli as a typical example for the principle of active immunizing in acute infectious diseases.

The questions arising in carrying out the treatment of tuberculosis with tuberculin come under the heads of: 1. Immunization; 2. Treatment.

In treatment we are concerned 1, with the tuberculin preparation to be used; 2, with the manner of applying same.

As to the tuberculin to be used, Koch's old tuberculin still remains as good as any. Other preparations may be milder in their reactions, probably because more diluted. The principle that has been adopted generally in tuberculin treatment is a reactionless use of O. T.

Herbert Koch recommends the use of considerable fluid dilution for the tuberculin. He uses 10 c.c. and theorizes that it is necessary for specific treatment to diffuse the tuberculin in the lymph and blood so that proper resorption can take place. Through this means the tuberculin will come in contact with many cells and create a general stimulation to the formation of anti-bodies.

Koch is of the opinion that by bringing the

tuberculin to many cells he releases the anti-bodies which are, almost without exception, found in cells. Through this method not only are cells activated to give up their anti-bodies, but the cells are trained to more active work. By giving small doses and increasing very gradually the power of these cells to render tuberculin innocuous is gradually increased. This view of Herbert Koch has not been given sufficient consideration in the use of tuberculin as a remedy. One endeavor on the part of many authorities is to produce severe local reaction, creating anti-bodies and these anti-bodies to be distributed in the system.

In following Koch's method, while there might be reaction at the seat of injection, it will be slight and of short duration—one to two days. A further detail: Do not repeat the injection at the same place. This is to avoid the possibility of an increased reaction taking place.

According to the researches of von Pirquet, then Koch's and Schiller's observations, it follows that if any part of the body has been in close contact with tuberculin, and in consequence had a specific reaction following, the reaction subsiding, on a repeated application of O. T., we have a much more severe reaction than if this tuberculin were applied to some other part of the system. This variation of place of injection of tuberculin is easily done and is of great advantage. You avoid the reactions following injections at the same place each time. The injections are made every four to five days.

Can tuberculosis be cured in children by using tuberculin treatment alone, or is it advisable to make conjoined treatment? Conjoined treatment is, by all means, advocated. Open air treatment, summer and winter, if the extreme weather does not interfere. It is questionable whether tuberculin treatment alone can cure.

The tuberculin treatment requires much of the system and must be closely observed. The slightest dose causes some reaction and this must subside before another dose is given. The more vigorous the body is the more easily these reactions are overcome, and this resistance is increased through general therapy. Sociological work is of great importance here. If the children can be properly taken care of at home there is nothing to stand in the way of ambulant treatment. Where the home surroundings and environments are poor and the people poverty stricken, we can

be certain that tuberculin treatment will be of little avail, but may be tried.

Technique.—The preparations for injections are simple. All preparations should be carried out under strictly sterile precautions. The different dilutions are made with normal salt solutions, various concentrations:

1 : 100 (Sol. A).

1 : 10,000 (Sol. B).

1 : 100,000 (Sol. C).

With these formulæ any required solutions can easily be made. The commencing (initial) dose is 1/1000 mg. O. T., the end dose 1 c.c. The end dose was reached gradually by increasing the dose given, requiring about 19 to 20 injections. The increase in dosage was about 3/2 of the preceding dose.

PIRQUET TABLE OF DOSAGE.

Number of Injections	The Amount of Tuberculin Given in 1/1,000 mg.	Amount of Fluid in C.C.
1	1.0	0.1
2	1.3	0.15
3	1.8	0.2
4	2.4	0.25
5	3.2	0.3
6	4.2	0.4
7	5.6	0.55
8	7.5	0.75
9	10.0	1.00
10	13.0	1.30
11	18.0	1.80
12	24.0	2.4
13	32.0	3.2
14	42.0	4.2
15	56.0	5.6
16	75.0	7.5
17	100.0	10.0
18	133.0	1.3
19	178.0	1.8
20	237.0	2.4
21	316.0	3.2
22	422.0	4.2
23	562.0	5.6
24	750.0	7.5
25	1,000.0	10.0

The injections are given in the back, seeking a different place each time, thus avoiding the local reactions. The skin is to be sterilized with iodine. Be sure that the needle is cut cutaneous.

Carrying Out the Treatment.—The initial dose is usually 1/1,000 of mg.; in certain cases 1/100 mg. The theoretical warrant for this dose is backed by the fact that a subcutaneous dose 1/100 of a mg. marks the lowest dose that will cause a reaction in a child responding to Pirquet. We commence our treatment then by giving 1/10 of this dose to be sure not to cause a severe reaction to those cases that are more sensitive. In using the solution 1/100 of mg. we cause some reaction, while by using 1/1,000 of a mg. we cause no reaction, it does not follow that we have not accomplished anything. On the contrary, we have affected the system in a definite manner.

The ground for using the mild or smaller dose is that we wish to remain under the dose that causes reaction so as not to cause too severe reaction in a more sensitive case and be compelled in some cases to stop treatment or to reduce the dose. In some cases even with a very small dose of tuberculin we may cause a most severe reaction, sometimes lasting for two weeks.

In some cases where the reaction was quite marked the initial dose had to be repeated four to five times before the reaction was no longer caused. In some cases we have had to stop the treatment on account of the intolerance of the child to tuberculin.

The choosing of a larger dose is not necessary because the initial dose can be very rapidly increased as the lack of reaction indicates. The final dose has been placed at 1 c.c. O. T. This establishing of the dose at so much is arbitrary, much more so than the initial dose, not having the same justification. I have given 1 c.c. without any reaction to speak of, and the tuberculous child stood it very well; in fact, the patient made a perfect recovery. I have not found an indication for a larger dose. As a last attempt I have several times given 1 c.c., but have not been able to increase this dose in all cases as the patients have not been able to work up to this dose.

The administration of tuberculin, as a rule, must be closely watched. If it is causing a good deal of reaction on the initial dose and on each successive increase of dose you will find that the patient will not be benefited by tuberculin treatment.

How many injections are necessary to arrive at a final dose? This depends on circumstances. At times a given dose has to be repeated several times before reactions cease and the patient has accustomed himself to the dose. In several instances we were obliged to stop the attempt at immunization. The reactions were constantly severe, and the influence on the patients of a distressing and harmful nature. The highest dose given a patient was 1 c.c. H. Koch reports one case where 2 c.c. was given. In one case eighteen injections were necessary before the final dose was reached. The number of injections necessary to reach this end dose varies with the reactions caused by an individual dose and the number of repeats necessary before no reactions take place. In other cases we can advance quite

rapidly in our treatment, requiring a much less number of injections.

In summing up the cases we found that but two or three of the whole number (22) were unable to stand the treatment, and we had to desist. This inability to stand the treatment can be easily determined. The end dose can be repeated any number of times, but there must not be too long an interval between the injections. How long we must continue to give the end dose is difficult to say, but depends a good deal on the condition of the patient.

Reaction. We expect and anticipate a reaction from every injection given for therapeutic purposes. These reactions affecting the tubercular localizations and the cells of the body (H. Koch). Years of experience have demonstrated to us that we must not cause too great a reaction. In some cases it may be necessary to cause some disturbance in order to carry out our treatment.

The reactions are general and local.

General reactions: Fever in first place.

Subjective symptoms.

Local reactions: The inflammatory state of local tuberculosis.

Fever Determination. As a rule we follow the temperature of a given case for two or three days, taking two hourly temperatures during the day and four hourly during the night, and thus get a given curve before commencing treatment. Tuberculin is now injected and the same procedure is followed. If in the next twenty-four hours we have a rise in the temperature of one to three degrees over anything we had during the preceding days, we reckon this as a reaction.

The fever, as a rule, subsides in a short time. In a few cases, however, the reaction is so sharp as to preclude any further treatment. In one case under treatment the treatment was followed by a rise of temperature up to 104 and this fever persisted with ups and downs for a period of fourteen days and was the cause of much anxiety on my part, but it finally came to normal. I very much feared a general dissemination of tubercle.

As a rule the reactions were more in evidence at the start. Once having learned the toleration of the patient, we could proceed accordingly without causing any further severe reactions.

We consider three points in the fever reactions: the degree of fever, the continuance of same, and the frequency of its appearance following injections. We consider the fever is due to the injection.

As a rule the duration is limited to one or two days. Where the fever is of short duration general symptoms are not much in evidence.

What causes a severe febrile reaction?

1. Susceptibility of the organism.

2. A too strong tuberculin injection.

According to Pirquet the first is due to antibodies; the second to antigens. We have the measure of the antigen that we inject.

What is of great importance in treating with tuberculin is increasing the dose. When small doses are administered at given intervals it frequently happens that the succeeding reactions are increased. Giving increased doses at measured intervals has the effect of lessening the reactions. On account of this we can keep on increasing the dose. Any method that allows one to increase the dose keeping just below severe reactions and allowing rapid increase of dose helps us to end results.

In giving injections of tuberculin it is necessary to avoid a too concentrated solution. You may give the same dose of tuberculin as in a previous injection, but in a more concentrated solution and thus cause a violent reaction.

Subjective symptoms which, as a rule, accompany or are described as part of the general reaction, are seldom noticed in children—general malaise accompanying fever; headache accompanying fever. In a few cases under my observation we observed nausea and loss of appetite. Besides the general symptoms we find in certain cases following tuberculin injections a local reaction.

Under local reaction we understand a slight inflammatory condition of local herds of tuberculosis. Of course, this can only be observed around visible herd, skin tuberculosis, glands, etc. One case in particular where we had marked tuberculides over various portions of the body, showed marked areola and inflammatory irritations about each herd. In this case we gave 1/10 of mg. Internal tuberculosis susceptible to examination will give demonstrable evidence of reaction. Formerly when using more concentrated doses of tuberculin we had a greater degree of inflammation and sometimes troublesome sores resulted.

Results. We have the most diverse opinions concerning the value of tuberculin in therapeutics of tuberculosis. At one time the opinions were favorable to its value; at another time the reports

were unfavorable to its use. On the whole, now among men of large experience, the opinion prevails that tuberculin, when given properly, with a full knowledge of its uses, proves a valuable remedy in tuberculosis as a curative and ameliorating measure.

The use of tuberculin has been confined mostly to adults. The specific treatment of children with tuberculosis has as yet not been properly carried out. Many physicians are still skeptical as to the benefits of tuberculin treatment in children. In trying to determine the ground for their objections we ascertained that there were two main reasons constantly brought forward. Many stated that the giving of tuberculin to children is dangerous and can lead to serious damage. Secondly, that the results are not better than those accomplished by the common general treatment.

If these reasons are well grounded they would do away with tuberculin treatment in children. Tuberculin has been and is being used with good results in the treatment of tuberculosis in adults. Why can it not be used in children?

It may be possible that the manner and form of tuberculosis is different in children than in adults; that the reaction to tuberculin varies in children as compared to adults; but there certainly must be some way to overcome the physiological and pathological conditions in children to make us use tuberculin with the same good results that we achieve in adults.

My experience with tuberculin does not entitle me to say much, but does give me the right to bring this subject before you and ask for more work to be done in this direction. In reviewing the cases in which I have used tuberculin I have come to this conclusion, verifying the experience in adults; advanced cases are hopeless and in such cases tuberculin does no good; contrary, it makes matters worse.

Out of twenty cases, two children reacted very sharply to the minutest doses so that it was impossible to continue the use of the remedy. In a given number of cases we obtained no results and discontinued the use of tuberculin. With the exception of two or three cases my experience was too limited to pass on the use of tuberculin.

One of the two cases was an extreme case of tuberculosis affecting the peritoneum and cervical glands and the pharyngeal plexus. The tubercular peritonitis was extreme; the peritoneum so studied with tubercle, that is, 1/2 c.m. in thick-

ness over the whole parietal and visceral peritoneum; the cervical glands were enlarged to size of a hen's egg to either side and retro-pharyngeal abscesses formed. This child was given up to die by several consultants. It had two laparotomies for abdominal symptoms. There were no lung complications. We started this child on 1/1,000 mg. and rapidly increased the dose so that in the course of three months the child was able to stand a dose .9 c.c. of Koch's old tuberculin. This child made a complete recovery and was exhibited to the medical society on two different occasions.

The influence of this treatment on the other children was of a general kind, increasing the appetites, increasing the general evidences of a more healthy condition. This cannot all be ascribed to tuberculin, as the children received the accustomed general treatment—outdoors, good nursing, good food, etc.

There is no doubt in my mind, based on what happened to the case just described, that the tuberculin was helping along. It is of influence on the physical and psychical appearance of the child. Children who, upon entering the hospital are pale and weak, show great changes, a better color, fresh and healthy, increase in weight. Increase in weight, while very desirable, is not always attained at the same time the child improves in health.

It is of great importance to subdue the fever. Absolute quiet, good food and fresh air in plenty, with the best of care in themselves achieve a great deal, but there is no doubt that tuberculin aids us also to influence the temperature.

The influence of treatment on local tuberculous is evidenced in diverse ways, dependent on the organ affected, whether the lungs, bones, eyes, etc. In the lungs the disease manifestations are dependent on the location of the disease and its freedom from restrictions—infiltrative form of T. B., chronic bronchitis, bronchial gland tuberculosis, and latent T. B. By latent form we understand that infection which is not discernible; that is, cannot definitely be located. We may have fever, night sweats, loss in weight, positive Pirquet, hereditary history, cough, anemia. These cases are positively helped by tuberculin treatment.

Children, the ages from three to nine, are those that are most frequently treated. In younger years we have miliary T. B., which

cannot be treated with tuberculin; the reactions are too sharp and the danger of further disseminating the tubercle too great. In the years three to ten we have more glandular affections and bone T. B., and the more favorable forms of lung T. B. In later years the lung affections approximate the form of tuberculosis of adults. While there is no doubt but that tuberculosis in the years five to ten is more easily affected by tuberculin treatment, owing to the localization of same being in more restricted forms, we must not overlook tuberculosis in the earlier and later periods.

How long is it necessary to continue the treatment with tuberculin? According to H. Koch, the length of time required to accomplish any effects depends on the localization of tuberculosis. For T. B. of lungs and bronchial glands his cases required twelve weeks average; some cases required thirty weeks; T. B. of pharynx and larynx, thirty-five weeks; T. B. of pleura (6 cases) seven weeks; one case of T. B. of peritoneum, ten weeks; my own case, four months; T. B. of bones, 11.3 weeks.

Indication and Contra-Indication. Severe affection of both lungs contra-indicate, severe degeneration of parenchyma organs, nephritis, etc. The reaction to tuberculin is also an indication as to whether we can continue to give tuberculin or not. Miliary T. B. and meningitis are also forms that cannot be given tuberculin.

CONCLUSIONS.

From the foregoing it is evident that tuberculin is of benefit in tuberculosis and can be given in many cases.

It was found necessary to work out some plan of giving the tuberculin; and as to the dose, this will evidently have to be elaborated, and will have to be based on more experience.

One fact has been established and that is that the dose of tuberculin must not cause a reaction. This has long been recognized in adults.

Tuberculin should be given in considerable dilution to prevent local reaction and reaction at the point of insertion.

The injections of tuberculin should always be made in different places to avoid local reactions.

The injections of tuberculin must be given within a limited time, five days interval.

THE SELECTION OF A PRACTICAL METHOD OF BLOOD TRANSFUSION*

KARL F. SNYDER, M. D.

FREEPORT, ILL.

The constantly increasing volume of literature dealing with the subject of blood transfusion, its indications, dangers and varied technique, bespeaks the augmented interest in this subject, founded without doubt on its real value and utility in the absolute conservation of human life in certain conditions, and the amelioration of disease and the prolongation of vitality in morbid processes not amenable to cure.

The present era of discussion of modern methods of blood transfusion is but a revival of a subject as old, according to some, as the discovery of the circulation of blood by Harvey in 1652.

The conception of the rejuvenation of the life and health of one individual by the infusion of blood from a healthy person appears early to have had an attraction to investigators to such an extent that they were tempted to use the crudest means to transfer the life-giving fluid from the healthy and living to the sickly and dying.

It is thus that we have as far back as 1492 a report, though not fully authenticated, of a Jewish physician attempting to save the life of Pope Innocent the VII by the transfusion of blood from boys. Better substantiated is the instance of Francesco Folli in an attempted, though unsuccessful, effort along the same lines in 1652.

The first well-vouched for report of blood transfusion through an external carrying system was an experiment performed by Richard Lawer in 1666, who carried blood from a dog's carotid into the jugular of another dog by means of quills fitted together. Later by the use of silver cannulas he was enabled to carry blood from a sheep's artery into a man's veins, how successfully not being stated.

During the eighteenth century the idea was first suggested of a direct vein to vein anastomosis by Tardy and Harwood. In 1818 James Blundell of England drew the blood of a dog into a vessel and reinjected it into another dog

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by means of a syringe and a two-way cock and reported three successful cases.

In the period from 1830 to 1850 numerous varied devices were suggested and used with few successes and many failures, as they were all by the indirect means, surgery not having advanced to a point making arterio-venous anastomosis possible, and not having a known anti-coagulant at hand for either coating the conducting systems or for mixing with the blood, and depending entirely upon the speed of the operation to get the blood from the donor to the recipient before coagulation could take place.

Aware as we are today of the safeguards necessary to be thrown about the method one's astonishment is great that any case could have been successful.

To Crile, Carrel and others in less degree belongs the credit of pioneering in the direct arterio-venous methods, but which, owing to their delicate technique, must ever remain in the hands of those especially qualified.

It was in 1909 that Brewer and Legget first employed paraffin as a coating to the carrying system to prevent coagulation, and the first instance of the use of sodium-citrate mixed with the blood to prevent coagulation is that of Prof. L. Agote of Buenos Ayres in 1914.

Lewisohn of New York made the first scientific studies of the efficacy of sodium-citrate as to its value as an anti-coagulant and its non-toxicity in the human veins and the proper proportions in relation to these factors.

In 1913 Kimpton described his method of indirect transfusion by means of a paraffin-coated Brown's tube, which has become known as the Kimpton-Brown method, and it was in 1915 that Dr. Nelson M. Percy of Chicago published his simplified method of transfusion by means of a modified Kimpton-Brown tube which put the whole subject on a basis as made it possible for this exceedingly valuable procedure to become available to those of the profession possessing moderate surgical ability and technique without subjecting their patients to unwarranted dangers.

I have thus gone over somewhat in detail the history of the transfusion of blood to illustrate the value of the procedure as held in the minds of investigators and the profession at large, indicated by the persistency with which this exceedingly difficult problem has been studied

and experimented with, as well as to show the constant endeavor to enhance the safety of the patient by reducing the complexity of the apparatus and to render the procedure more available by so simplifying the technique that the average well-qualified and equipped surgeon could utilize it with little danger to the patient and a small percentage of failures.

It was also in 1915 that Lewisohn of New York published the results of his investigations of sodium-citrate as an anti-coagulant, and it is upon the results of these researches that he has formulated his methods and technique of transfusion which, as a routine procedure, for simplicity and safety in the hands of the average man cannot be equaled in my belief by any method as yet advocated.

The transfusion of blood is attended by certain dangers as you all know, the avoidance of which is absolutely necessary to the patient and the success of the transfusion.

It is for the escape from or lessening of these dangers that the various expedients and techniques have been devised, and it is these accidents that the Lewisohn method appears to minimize to a greater extent than any other procedure.

While you are doubtless familiar with these potential accidents an enumerations of them may not be out of place.

First—Of greatest importance is incompatibility of the bloods of the donor and recipient as shown by the agglutination or hemolysis of the corpuscles of one blood by the serum of the other blood and which is to be avoided in large degree by appropriate laboratory or bedside reactions.

Second—The transmission of chronic or acute disease from one patient to another, which is to be avoided by a proper history and blood examination of the donor and which is eliminated as to recipient to donor by the indirect methods of Percy and Lewisohn.

Third—Acute dilatation of the heart, which is to be guarded against, especially in those suffering with myocarditis and requiring massive doses of blood and which is easily avoided in the citrate method by prolonging the time of infusion, but not so easily controlled in other methods where the time element is important and delay in infusion may result in premature blood coagulation and failure of the operation.

Fourth—Air embolism, which is easily avoided by proper care.

Fifth—Blood embolism, which is easily avoided in the citrate method by proper technique and proper mild agitation of the blood as it comes into the citrate, but not so easily avoided in other methods where potential coagulability of the blood is not altered by external means and actual coagulation, but awaits access to the air or a touch of foreign material to become inaugurated, and the life of the patient endangered or the success of the transfusion destroyed.

The technique of the citrate method as described by Lewisohn is as follows:

The outfit for a blood transfusion consists of two small glass jars, two large glass jars, two glass ampules containing 50 c.c. of sterilized 2.5 per cent solution of sodium-citrate, one large sized cannula for taking the blood from the donor, one small sized cannula for the injection of the blood into the recipient, one glass rod and a salvarsan flask with rubber and glass taper connection. The arms of donor and recipient are washed with soap, water and alcohol. If the veins are visible, iodine is to be used. A tourniquet is applied to the arms, causing moderate distention of the veins. A vein in the donor is punctured with a cannula of large diameter. It is important to insert the cannula properly so that the blood runs through it rapidly in a large stream. If difficulty is encountered in the proper insertion of the cannula the vein may be exposed by a small incision. The blood is collected in a large glass jar. This glass jar contains half the quantity of sodium citrate needed for the transfusion. In other words, if 500 c.c. of citrated blood are needed we pour 25 c.c. of citrate in the large glass jar and add the residual 25 c.c. after we have collected 250 c.c. of blood. The blood is gently stirred with a glass rod to insure its proper mixture with the coagulant. After the collection of the required blood volume cannula and tourniquet are removed and the wound sealed. The recipient's vein is then usually exposed by a small incision. The cannula of smaller calibre is introduced, the salvarsan flask attached to the cannula, and the citrated blood poured into the glass flask. As a rule, 50 c.c. of salt solution are run through the tubing in order to prevent air bubbles from getting into the circulation of the recipient. The technical steps for the injection are exactly the same as those for an intra-venous infusion of salt solution. The technical simplicity of the citrate method is based on the fact that coagulation of the blood during transfer from donor to recipient is absolutely prevented by mixing the blood with an anti-coagulant, i. e., sodium-citrate.

Lewisohn further says:

The experiments which I published in 1915 showed that a very minute dose of sodium-citrate (0.2 per cent) is sufficient to prevent coagulation of blood for

two days. Furthermore, these experiments showed the absolute atoxicity of such citrated blood for the human organism, even when large amounts of blood (for instance, 1,500 c. c.) are required in cases of profuse hemorrhages. The coagulation time of the recipient's blood is temporarily shortened.

As will be seen, the technical portion of the procedure resolves itself into a pure infusion of a non-coaguable material which is easily prepared as a simple mixture, the great requirement being a proper relation of the bloods and their proper handling.

SUMMARY

The choice of the Lewisohn method of blood transfusion by the citrate method as the most practical routine method is based on these conclusions:

First—It obliterates the danger of recipient to donor contamination.

Second—The preparation of the blood requires no unusual skill in withdrawing the blood, in mixing it, or handling it.

Third—No attention need be taken to the danger of premature coagulation after the blood is prepared from defective preparation of paraffin surfaces or delay in injection, as the blood is not affected by the condition of the walls of its container or the transmitting system and may be kept for hours before injecting.

Fourth—Blood may be taken from the donor and transmitted to the bedside of the recipient at a distance.

Fifth—The danger of hemolysis is reduced to a minimum as by the technique of injecting 10 c.c. of the blood and interrupting the current for a few minutes to note any premonitory systems of this catastrophe serious results may be obviated.

DISCUSSION

DR. N. M. PERCY (Chicago): I am sure that everybody has enjoyed the paper and the most interesting films which have been shown. As Dr. Snyder said, the most important part of a blood transfusion is the selection of a donor. The film shown, demonstrating the technique of the Rous-Turner method of determining the compatibility of bloods, was very interesting, but I imagine that most of you here feel as I do, and that is, we would have to have a good laboratory man to carry out that technique for us.

During the past few years I have been using the grouping method, as brought out by Moss several years ago, which classifies individuals according to the agglutination properties of their blood.

Recently we have been using a simplified technique

of determining the Moss grouping as brought out by Vincent of Boston. By this method, the patient and donor can be grouped in a few minutes and without any special laboratory apparatus.

In using this method, one must keep on hand a little serum from an individual in group 2 and one in group 3, the test being made without separating the cells from the serum and without using any chemicals. A drop of No. 2 serum is placed upon one end of a glass slide and a drop of No. 3 on the other end. A drop of the blood which is to be tested is mixed in each of the serums and their action noted. If agglutination takes place in group No. 2 serum and not in group No. 3, the individual being grouped is group No. 3. If agglutination takes place in No. 3 serum and not in No. 2, the individual is in group No. 2. If there is no agglutination in either serum, the individual is in group No. 4, and if agglutination takes place in both serums, the individual is in group No. 1. The agglutination will take place usually within thirty seconds and practically always within two minutes and can easily be seen microscopically. If the reaction is slow and not very marked, and there is any doubt about agglutination having occurred, this can be determined with certainty by placing the slide under the microscope.

This method is so simple that a donor can be selected in a few minutes and without any laboratory apparatus. By carefully grouping the donor with the patient, the condition of hemolysis can practically always be avoided. There is a reaction independent of true hemolysis which frequently occurs following transfusions and varies considerably with the various methods of transfusions.

Of the various methods used, I think the citrate method will give the highest percentage of reactions. We do not know just what causes these mild reactions following blood transfusion. Undoubtedly some change always takes place in blood as soon as it leaves the giver and the most conspicuous change is that of clotting. The early changes incident to clotting are the appearance in the blood of abnormal proteins. The use of anti-coagulants do not prevent the early changes incident to clotting. They simply arrest the process. The citrate method does not prevent the early changes of coagulation, which undoubtedly accounts for some of the reactions following transfusions.

The experiments of Drinker and Brittingham, as carried out at the Peter Brent Brigham Hospital in Boston, are very interesting. They have demonstrated, first, that the cause of reaction following blood transfusion comes from some change in the blood cells, and, second, they have demonstrated that sodium citrate has an influence upon the red cells which makes them more susceptible to hemolysis. This they demonstrated by the following experiments. They drew off blood, defibrinated, washed the red cells, and added normal salt solution sufficient to bring it up to the same volume and reinjected. This gave them a mild reaction in about 20 per cent of

cases. They then repeated the experiment, using exactly the same process, but in addition they added the amount of sodium citrate solution as used for transfusion, which gave them 44 per cent of reactions.

If the blood is not out of the body too long, and is not mixed with any foreign substance, I do not believe that there should be reaction in over 10 per cent of cases. By reaction, I mean a chill followed by temperature of 101 or over.

DR. GRINSTEAD (Cairo): Some years ago I read an address by the renowned Andrew Carnegie, that wonderful genius known to everybody, in which he stated that he had always been fortunate in that he had been able to select men to manage his business who were much wiser than himself. Now, in this instance, I have been able to do that stunt. Dr. Percy has been put on the program because he is an authority, not on the printed program, but you just heard him. My experience in transfusion has not been sufficient to entitle me to assume the role of an authority on the subject and therefore this little change in the program of this morning, which has been so very pleasing and so very satisfactory to all of you.

DR. SNYDER (Freeport): In regard to Dr. Percy's choice of methods of testing of compatibility of blood, I will say that the first film was put on, as I explained, accidentally. I entirely agree that the simplest and best method is the Vincent method, requiring far less technique and being much simpler. I simply described this as it went along because it was here in the screen. Of course, we all know that Dr. Percy's method of blood transfusion is very fine. I have used this method and absolutely have no criticism to make. The choice of the subject this morning, however, was the most practical method for the average surgeon or physician who has an occasional case.

The only difficulty that I have had with the use of the paraffin method is in the preparation of the tubes, and when I have some one that can attend to this sufficiently, or can attend to it myself, I have no criticism whatsoever; but this is the only part of the technique of the Percy method that has caused me any trouble and that has led me to occasionally, or perhaps in the majority of cases, use the method described.

A LITTLE JOURNEY TO THE HOME OF JOHN HUNTER.*

W. E. SHASTID, A. M., M. D.

PITTSFIELD, ILL.

In a purely scientific program I have thought that it is occasionally profitable to vary it enough to consider the influence that certain pioneers of medicine and surgery have made upon modern thought and investigation.

One of those pioneers was John Hunter, whose

*Read before the Pike County Medical Society.

name has shed undimmed luster upon science, as the years have come and gone.

I remember quite well, though it has been some years ago, sitting upon one of the public benches in the little park that ornaments the center of Leicester Square, London.

It was a day in early autumn when the grass was still green, but the leaves were beginning to fall and the flowers were fading.

There was no suggestion of fog and the mellow sunlight of the early afternoon made glorious the historic splendor of this famous square.

With guide book in hand, I was picking out the homes of men who had moulded the thought and shaped the destinies of this strong Anglo-Saxon race, in literature, in art, in science and in history.

Over there across the way was where Sir Isaac Newton lived, he who formulated for us the law of gravitation. In another old house lived Sir Joshua Reynolds, the great painter. Hogarth was still another inhabitant of this famous square and over near the corner in a big three-story brick house which looked as though it were three or four centuries old at least, lived the subject of my sketch—John Hunter. I read from my guide book: "John Hunter, the great surgeon and founder of the Hunterian Museum, now the College of Surgeons, lived on the east side of the square in such and such a house." Somehow as I sat and ruminated upon the career of this remarkable man, the historic past came before my mind and I could imagine and visualize the opening of that big, thick oak door of that old house and Hunter stepping out for his day's work.

Hunter was a contemporary of our own George Washington, and while our original thirteen colonies were fighting to throw off the yoke which was so sorely pressed upon them, the science of medicine and surgery was just beginning to take some form, as far as England was concerned, of a branch of science that had a very narrow foundation and was but little further advanced than a crude trade.

As a matter of fact, the barber-surgeons or blood-letters was the guild that immediately preceded the founding of the science of medicine and surgery and to Hunter chiefly we are indebted that he took our science out of the hands of these barbers and placed it upon a solid, firm and secure foundation, to grow as the years increased, and inventions and discoveries multiplied.

In France at the time, it was true, owing to the influence of Ambroise Paré chiefly, surgery had advanced further than it had in England. In Prussia it was a mere trade—one of the duties of the so-called doctors was to shave the officers of the line, of those who were fighting with Frederick the Great, in the Seven Years' War. This seven-year's war antedated our own war for independence by twenty-five years, and while these wars were in progress Hunter was slowly but surely bringing out of the chaos of scattered facts, observations, traditions and folk-lore, that order which was to be the basis of our present-day structure of the science and art of medicine and surgery. Chesselden and Pott, it is true, were the teachers of Hunter as well as his brother William and were famous as the outstanding representatives of surgery and medicine in its emergence from the chrysalis, but it is a fact that Hunter was the first man to place the science on its true basis of physiology, pathology and anatomy. In fact, he was the first pathological anatomist in any land and his museum of pathological specimens comprising some ten or fifteen thousand was given its place, later on, in the Royal College of Surgeons at Lincoln's Inn Fields. His monographs were numerous and many sided as was their author; many were lost, some stolen and some burned, but enough remained to indicate the daring originality and versatility of this remarkable genius. In the year 1761 he was attached as staff surgeon to the expedition to Belle Isle, and in this campaign is supposed to have gained his remarkable knowledge of gunshot wounds and war diseases, which experience was utilized to the fullest, in his investigations and teachings to his pupils in London. His was a busy life of investigation, teaching, experimenting and co-ordinating his observations, so that they have made a firm basis for modern science to rest upon. As an example of his industry, we may cite the fact that he dissected not less than 500 of the lower animals so that he was for his time, the world's foremost biologist and comparative anatomist. His acute observation of the collateral circulation in the horns of a deer, in one of the parks, is said to be responsible for his scientific treatise on aneurism, which rings true to even Twentieth Century science. He wrote on many subjects, many of them of epochal importance—inflammation, pyemia, phlebitis, intussusception, shock and various dis-

orders of the vascular system. His study and treatment of venereal diseases were exhaustive and exact, and his statements in many instances are in accord with present-day belief. He died in the year 1793 of angina pectoris, full of dignities and honors, having left to the world the priceless heritage of a well-spent life, an industrious career of unusual activities and original investigations, without equal of its kind; the founder of modern surgery on a scientific basis; and sharing with Paré, the Frenchman, and Lord Lister of our day, the honor of being one of the three greatest surgeons of all time.

He lies in Westminster Abbey, that Pantheon of the English Great, with those who have made immortal the Anglo-Saxon race through centers of the world, as well as the far-flung islands of the sea. Standing by the simple marble slab that covers his remains, which has only the words "John Hunter" upon it, it seemed to me that that was enough, it was not necessary to add to the epitaph. In his last sleep he has for his neighbors, great sea captains and admirals, explorers and colonists, great men of science, art, law, literature and music. Great names that we learned when we were children in school, those that have helped to shape the very language in which I am speaking and have added splendor and luster to English history for a thousand years.

"The immortal dead,
Who rule us from their urns."

THE FLIVVER AND THE FLY.

The automobile is a factor in community health and sanitation.

True, it is noisy and at times belches out fumes and odors which are anything but pleasant or agreeable. But properly handled, the auto, from a health standpoint, is a factor of safety. Why? "Flivvers" do not breed flies. Any alley fringed with a row of garages, once private barns housing the reliable old family horse, or the more aristocratic carriage and pair, is no longer breeding flies by countless millions.

The old time familiar and omnipresent open manure box has practically vanished from sight, even where barns and stables still exist. And as each manure box was an ideal breeding place for the dirty, dangerous house fly, the most exclusive resident districts of the city were by no means exempt from these nasty little pests.

The horse is a noble animal and has performed and is still performing wonderful service for man. But when it comes to fly production, any old family horse can be the direct means of producing more flies in

thirty days than all the automobiles in the State of Illinois could produce in a hundred years.

When Mr. Jones' auto bumps into and seriously injures a foot passenger on the street, both the owner and the machine come in for a good, hard cussing from everybody. But when the same Mr. Jones kept a pair of horses in what is now his garage and the flies bred in the piles of stable manure which his horses produced, started an epidemic of typhoid fever in his locality, or killed a few of his neighbors' babies with dysentery, no one damned either Mr. Jones or his disease-breeding flies. You see, the people in those days did not see the connection between the alley manure pile and the sick baby only a block away.

Of course, with the light we now have, even with horses in as general use as they were before Mr. Ford flooded the town with his flivvers, people wouldn't stand for open manure boxes. Still, we must hand it to the auto as an agency that contributes to community cleanness; besides, as a medium for rapid transportation for private use, it has the good old family horse faded into the dim and imperceptible distance.

There is also another health side to the automobile—the big, outdoor, fresh air and sunshine side. But those who have automobiles know all about this. And as nearly everybody has an auto of some kind or other, there is no need of discussing the matter where there are so few people who would be interested.

Moral: A gasoline tank in the back yard is better than the open manure box in the alley.

SOME SUMMER DONT'S.

Here are a few Dont's which should help you keep well and healthy during the vacation and the hot weather period.

Don't go to a summer resort that has an unsafe water supply.

Don't go to a summer resort that uses milk that is not known to be clean or where the milk is not pasteurized.

Don't go to a summer resort where the toilet facilities are open to flies and otherwise unsafe.

Don't go to a summer resort where they dump their garbage in the open so it can be a breeding place for flies.

Don't go to a summer resort where flies are numerous and screens are few.

Don't go bathing soon after eating.

Don't get bathing water in your mouth while bathing.

Don't bathe in dirty water or near where drains or sewers empty.

Don't eat much meat in hot weather; eat more fruit and vegetables.

Don't drink ice water when you are warm or overheated.

Don't overload your stomach at any time.

Don't lose your temper or get angry. Keep cool.

You will be less liable to get sick if you read and heed these suggestions.

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AUGUST, 1919

Editorial

BY THE NEW EDITOR.

Beginning with this issue the ILLINOIS MEDICAL JOURNAL takes on new management. In assuming supervision the new editor takes recognition of the recommendations of the retiring editor regarding some desirable and much needed constructive work. Modesty forbids saying more than that the new editor is not unmindful of

the many serious problems that confront the medical profession.

As a former president of the Society and for many years a member of several active committees of the organization and otherwise intimately in touch with the scientific, economic and other issues, favorable and unfavorable, effecting the profession, the editor feels that he is not wholly in the dark as to what is before him. Because of his previous activities for the betterment of the Society the editor feels that he is merely facing anew the ghost that stalks before him, his responsibility as Editor. The Editor accepts the responsibility in full. If he failed to accept it in any other spirit it would be ingratitude to the council of the State Society which selected him for the high position.

Medical affairs cannot remain stationary. Our organization cannot rest on laurels won or achievements gained. We realize that there are numerous "after-the-war" problems to be thought of and worked out. We realize that we are in the presence of a great social and economic upheaval, that nations are being made, unmade and remade. That the medical profession will to a great degree be caught in the sweep of forces beyond its control; that it is potent and responsible for the part it shall play in the new order of things. For all of us it is bound to be a strenuous time of readjustment; it is also an unequalled time for surveying the future of medicine and formulating plans for rational development.

What practical solution have we to offer and what attitude shall we assume in attempting to regulate those momentous activities that are shaking the foundation of our modern civilization and menacing the very existence of medicine as one of the liberal professions?

Demobilization means that 35,000 of the Doctors of America, one-fifth of the total number, the most virile and efficient fifth, are returning to their work after a year or more of intensive training. Most of them are temporarily unfitted to taking up general practice in the old way. They will find that the Red Cross diagnostic clinics, Boards of Health, the Life Extension Institute, the school nurse and other similar activities, are ready to take over a large share of their work.

They will find that under the Workmen's

Compensation laws the remuneration for most of their accident practice, is being taken over by the hospitals, while the insurance companies dictate the mite that they will receive for the little that does come to the office. Under the proposed health insurance law, while every care is to be taken that the employer shall pay as little as possible, that the employee shall receive as much as possible, little or no provision is made that the Doctor shall receive a living wage.

In the new order of things no consideration of self-interest is going to satisfy either the rank and file of the medical profession or the public they serve.

In the re-arrangement, medicine *per se* will more than ever be guarded not merely as a means of earning a livelihood, but as an essential service to mankind, so in this great problem of re-adjustment physicians should have as much influence as any other class in the weaving of the new social fabric.

If the world's work is to be done by collective bargaining and if we are to hold our own against the socialization of the profession, if we are to be something more than the hired man of the great insurance companies, or guide posts to the nearest specialist, we must be prepared to meet the situation or go into the discard. It behooves us therefor to bestir ourselves, to keep up with the changing times and do our part to help resist the unthinking drift towards radical innovations. Now, during this active re-constructive period, is the time to begin to weave our constructive fabric in order that our country should not be made safe for *Bolshevism*.

As individuals and as an organization it is well to realize the force of the many destructive agencies operating in this country today and for us to appreciate the need of a closer union of the profession, of a stronger organization, so that we may face these problems with the strength of many minds united.

No class can govern the world without the assistance of the Doctors. The war has shown that medical science is leading the van in all that stands for progress for the betterment of mankind. It is only necessary for the medical men to show a united front, to demand a proper recognition, in order to help direct the changing social order.

So with a thorough appreciation of the real situation and with a united alert organization on guard the medical profession may be able to secure the right and recognition of its merits, and also have that real influence necessary for the best interests of the profession and the public in the new order of things.

Having surveyed the situation as it pertains to the future of medicine in this country let us now take up the responsibilities of the editor, his limitations and the possibility of making the JOURNAL what it should be in order to best serve the interests of the profession.

The responsibility of the editor is divided between the editorial and the business conduct of the JOURNAL. Editorially, the responsibility is as to the source and the effect of the news which he prints. With the secular press, the slogan is "get the news," ways and means being a minor consideration. But the medical editor must first consider the source of the news and when he has gathered it must do what few secular editors bother about, he must verify it in every detail.

The Editor of a State Medical Journal in weighing the matter at hand for any issue must be mindful of the fact that while he is the defender of the profession he dare not become an aggressor. His duty is to convert those who are inimical to the organization and not to antagonize them further. He must always fight for right and justice, but he must not become a mere pugilist, battling only to amuse the sporting audience. In other words, he must adopt the tactics of a certain African missionary, who modestly confessed to his confreres in a Methodist missionary conference, that while the cannibals were waiting for the pot to boil, he converted them from heathenism.

A medical editor has very decided responsibilities even beyond these points. Still, though he holds a position of importance and accountability, by no means does he lead the procession of authority; he is accountable to the great medical organization of the State, and he must be most cautious not to trespass upon the duties and rights of others. Opportunity and temptation to do so may be frequent. But on occasions ideas of his own must be suppressed and his pen restrained from a word of criticism which it is not his place to give. It is not that

these limitations are resented by him but that the failure of the members, contributors and readers to understand them comes back to him in bitter criticism of himself and his work.

The responsibility of the Editor goes over to the business control also. Here, I fear that some editors have laid themselves open to a charge of neglect. One occasionally finds medical publications printing advertisements which even some of the higher grade of the secular press would refuse to handle. Nostrums known to be worthless are given admission to the advertising columns of some medical journals. There is a second consideration but so self-evident that it needs little emphasis. The advertising columns must never influence the editorial columns of a medical journal. Failing in this, the medical journal will immediately descend to the level of the secular press.

At the outset I wish to remind the members of our great organization that they are an integral and necessary part of the wide awake fraternity known as the Illinois State Medical Society. There should be no misunderstanding between the membership and the editor as to the difficult problems and responsibilities, the running of a State Medical Society imposes upon both. The members must not assume the "Let George Do It" spirit. Many heads are better than one and many tongues and eyes are better than one tongue and two eyes. One of the finest things about organization is that several people closely in contact for years can, if they will, benefit by each other's viewpoint of life.

Our JOURNAL is the official organ of a corporation with upwards of 7,000 stockholders, the editor having only a limited authority. He cannot make the JOURNAL what it should be without the co-operation and support of the members. The sooner the membership realizes that the JOURNAL is their publication and the sooner they are brought to appreciate that what they get out of it depends upon what they put into it, the better it will be for the JOURNAL.

To reach the ideal of perfection the Society must be an eye opener. A wide awake interest in the JOURNAL on the part of the members will soon bring all to realize the value of the bond, this monthly publication creates between the various County Societies, and the influence

it has in helping to bind the entire membership into a more homogeneous whole.

Our Society cannot afford apathy or indifference to any degree or in any form. If we are sincere in our plans and aspirations for a better social order, we must begin by at once establishing our constructive policy and show an ever-ready readiness to work harder and more harmoniously, for the sake of the newer ideals of professional betterment and social justice. There is no better method of doing this thoroughly than showing a mutual interest in the success of an undertaking that requires team work from first to last.

In addition to the medical problems mentioned by the retiring editor the new management in conducting the JOURNAL will strive for the following ideals:

To keep the profession informed of whatever is happening in medical circles in our own State as well as throughout the world.

To help federate and bring into one corporate organization the entire reputable medical profession of Illinois.

To create a better understanding among the profession of the many agencies seeking to engulf it.

To safeguard the enactment and enforcement of just medical laws.

To guard and foster the material interests of fellow members and protect them from imposition.

To prevent the enactment of laws giving quasi-medical organizations or individuals the right to practice medicine without proper qualifications.

To prevent the enactment of laws giving supplementary medical organizations mandatory or discriminatory power over hospitals or institutions owned and supported by medical men.

To convince law makers as well as governments, both National and State, that in our legislative halls and in State Department heads there must be more people who can see with the eyes of medicine.

To help maintain the standards of medical education.

To extend medical knowledge and advance medical science.

To educate the public in medical problems as they relate to the common good, to the end that

we may hope to reach the point where we can hand over to the public the responsibility of protecting themselves by appropriate laws. Certainly we should concentrate our energy on the enlightenment of the public in order that we may the sooner throw this burden on them rather than trying to carry it through ourselves.

To direct public opinion along proper channels in regard to the great problems of preventive medicine, to the end that the profession shall become more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life.

The new administration will be democratic in all that the word implies. Any other policy provokes and inspires reaction by some other class and would be out of harmony with the real purpose and ambitions of our organization.

The policy of the new editor on all questions will be to remain independent, not to be the mouthpiece of any individual or group and to work only for the best interest of the profession and the public.

While we should always present a united front to the enemy it would be erroneous to say that Doctors never disagree. It is impossible for everyone to view problems from the same viewpoint. Too, it is erroneous to think criticisms do no good. People seldom like to be told of their shortcomings, however, there is a real moral benefit to be gained by dignified criticism.

There may be times when members may think the editor's viewpoint is not what it should be. In this connection they should not forget that the rule works both ways. The sensible man takes heed of criticism and profits by it.

From time to time new conditions will arise; it may become necessary to criticise not only policies but individuals. Should this become necessary it will be done with a spirit of fairness and with the sole idea of bettering conditions and arriving at a better understanding of the proper solution of new problems.

Having outlined the extremely difficult path a medical editor has to travel, may I not ask for your help and co-operation in making the ILLINOIS MEDICAL JOURNAL the greatest and most influential of any of the State Medical Journals.

TO MEMBERS AND CONTRIBUTORS

It is expressly understood that articles contributed to the ILLINOIS MEDICAL JOURNAL have not been, and if accepted will not be, offered to another journal for prior or simultaneous publication; no objection can be raised for the subsequent reproduction of any of them. Although it is believed that reprinting or simultaneous reproduction of papers in readily accessible journals in a given field is professionally unnecessary, bibliographically undesirable and economically wasteful, however, if a contributor has a paper printed elsewhere subsequently to its appearance in the ILLINOIS MEDICAL JOURNAL (excepting a volume of society transactions), due credit shall be given for original publication. The editor relies upon all contributors to conform to this rule.

Manuscripts should be typewritten, preferably double spaced, and only clear verified copies presented. The name and address of the author should appear under title of the paper. Literature cited should be assembled at the end of a manuscript in numerical order and should be numbered serially. These bibliographic items in the list should be referred to, in the text, by numerals in parentheses corresponding with the sequence numerals in the list. Each item in this reference list should consist (in this order) of the (a) numeral indicating its sequence in the list, (b) name of the author, (c) year of publication, (d) exact title of the paper (or book) referred to, (e) full title of the periodical containing the paper, (f) volume numeral for that periodical, and (g) numeral for the first page (or page specially cited) of the paper.

All illustrations should be submitted in such forms as to admit of photographic reproduction without retouching or redrawing. Marginal letters cannot always be set in type and should, therefore, be written in India ink and regarded as parts of the original illustrations; or, in doubtful cases, the marginal lettering may be inserted temporarily, with lead pencil, for suitable attention by the editor. Unless specific instructions are given by authors, the printer will be requested to determine the degree of reduction that may most suitably be applied to illustration. Reproduction of illustrations can be effected most satisfactorily, as a rule, when the

originals are large enough to permit of considerable reduction in the plates prepared from them.

ABRAHAM JACOBI.

Dr. Jacobi, the Nestor of American Medicine, honored throughout a long life as few medical men have ever been died suddenly at his Summer home at Lake George, N. Y., July 10.

Born at Hartum, Westphalia, May 6, 1830, he received his medical degree at Göttingen in 1851. Identified early with the revolutionary party in Germany he was arrested and imprisoned for two years. In 1853 he came to New York and in 1860 was called to the chair of pediatrics just established in the New York Medical College. From 1870 to 1902 he was professor of diseases of children in the College of Physicians and Surgeons, becoming professor emeritus in the latter year. In 1894 he refused an appointment to the chair of pediatrics at the University of Berlin.

A voluminous writer on medical subjects related to his specialty, he published several volumes and numerous articles which were collected and published under the title "Collectanea Jacobi" in 1909.

A member of numerous societies, local and national, he was honored by election to the presidency of many, including the American Medical Association, in 1912. The degree of Doctor of Laws was conferred on him by the University of Michigan, Columbia, Yale, Harvard and Jefferson.

WHY OSLERIZE?

On July 12 we celebrated the seventieth birthday of Sir William Osler, the man who a decade ago recommended that when a man reached three score years of age he should be choloformed.

Had Dr. Osler's theory been in vogue even for so short a time as the last century there is no way of estimating the loss to the world and posterity.

We notice in passing that some of the greatest work of Dr. Osler's busy career has been done since he reached his sixtieth year. Of the seven hundred and thirty books and articles published by him in the last forty-nine years one hundred and forty-three, or one-fifth, have been published

in the decade between sixty and seventy, and this in spite of the fact that between the years nineteen fourteen and nineteen the world's greatest war made great inroads on his time and seriously handicapped his activities along literary lines.

The activities of Dr. Osler in the last ten years are inspiring to say the least and accentuate the spirit of the times and impress upon us the fact that there is no age limit and that the old saying, "a man is as old as he feels" is exemplified daily.

We, who have been through the highways and byways of life during the last five years and saw what is going on there, cannot agree with Dr. Osler's statement that people ought to be killed off at sixty. We insist that there is no age limit for service.

Dr. Osler's observation and experience during the last five years should convince him that no longer are old men and women relegated to the rear to pine away the declining years after sixty, sitting in the parlor in easy chairs with pipes and knitting needles.

Throughout the ages these boys and girls past sixty have been in the foreground of existence and many of them on the firing line in the battle of life.

He who places stress on age limit for accomplishing things has only to look over the recent list of the names of men who played a conspicuous part in the world's greatest war:

Clemenceau (physician), seventy-eight; Woodrow Wilson, sixty-three; Foch, sixty-eight; Joffre, sixty-seven; Petain, sixty-three; Lord Kitchener, seventy-three; French, sixty-one; Colonel March, sixty-five; Admiral Sims, sixty-one; Arthur Balfour, seventy-one; Admiral Jellicoe, sixty; Earl Brassey, eighty-three; Colonel House, sixty-one.

Von Kluck, seventy-two; Von Hindenburg, seventy-two; Von Zeppelin, seventy-eight; Von MacKensen, seventy; Von Moltke, sixty-four; Kaiser Wilhelm, sixty; Admiral Von Tirpitz, seventy; Von Hertling, seventy-six; Count V. ZuChulenitz Czernin, Austrian Minister, sixty-two; Abdul Hamid II., late Sultan of Turkey, seventy-seven.

It has been frequently stated that the war could not have been carried on without these men. In previous wars men of the ages mentioned were left at home, but in the world's war these

men showed the staunch stuff of which they were made. In this last war age was of no moment. Elderly men and women who had been inactive for years came forward into service, led movements everywhere and made themselves indispensable.

In truth the matured mind in this great war was one of the biggest elements that played the winning part. Let us glance superficially over a few of the characters in other walks of life and review briefly some of the military leaders, statesmen, artists, sculptors, scientists, authors and actors who have played a leading role in life's drama and who achieved fame after sixty and many of them after seventy and still others who were at the zenith of their fame even after eighty years of age. Here are a few of the most conspicuous:

Lord Roberts in harness at time of his death at eighty-two; Wm. E. Gladstone, statesman, eighty-nine, did some of his best work after eighty; Elihu Root, head of American Mission to Russia, seventy-four; Cardinal Gibbons, noted prelate, eighty-five; Porfirio Diaz, president of Mexico, eighty-five; Marquis K. Inouye, great Japanese statesman, eighty; Count Sergius Witte, great Russian statesman, sixty-six; Sir Herbert Beerbohm Tree, sixty-three; Tzu-Hsi-an, Tiger Empress of China, seventy-four; Li Hung Chang, Chinese statesman, ambassador and soldier, seventy-eight; Prince Ching, Chinese Premier, eighty; Joseph H. Choate, eighty-five, a factor in America's life until he was eighty; Thomas A. Edison, inventor, seventy-two; Auguste Rodin, French sculptor, ninety-two, who did his greatest work in the last fifteen years; Rosa Bonheur, unrivalled French artist, seventy-seven, did her best work in the last years of her life; Mrs. Humphrey Ward, representative woman novelist, sixty-eight; Claude Dubussy, French composer, sixty-five; Leo Tolstoy, Russian novelist and reformer, eighty-two; Max Nordau, French physician and author, seventy; Sarah Bernhardt, celebrated actress, seventy-five; Wm. Winter, dean of dramatic critics, eighty; Giuseppe Verdi, Italian opera composer, eighty-eight; Jules Massenet, French composer of operas, seventy; Henrik Ibsen, Norwegian dramatist and poet, seventy-eight; Belva Lockwood, eighty-five, in harness until after eighty; Ella Flagg Young, head of

the Chicago Public School system, seventy-three.

This list of great men and women illustrates beautifully the statement that it is never too late for success provided the will and desire are there.

As the Salvation Army wisely put it, "a man may be down but he is never out."

In view of the great accomplishments of these boys and girls, many of them past even the three score and ten limitation, we cannot help but feel that Dr. Osler spoke facetiously when he said that every one reaching the age of sixty should be chloroformed.

OUR HONORED DEAD.

"If ye break faith with us who die,
We shall not sleep, tho' poppies blow in
Flanders fields."

—McCRAE.

The war is over and the soldier boys are rapidly coming home from France. Soon the great conflict will be nothing but a memory. And yet this brings home to every physician and medical organization, mingled feelings of joy and sorrow—joy that we were able to contribute so magnificently and effectively to the cause of liberty throughout the world, and sorrow that several of our physicians had to make the supreme sacrifice.

According to the Surgeon General's office, the fatalities among the medical officers up to May, 1919, were as follows:

Lost at sea.....	4
Killed in action.....	45
Died of wounds.....	26
Died of accident.....	5

—
Total deaths 80

A further statement, from the same source, gave a list of 290 medical men who died of disease while in active service. Therefore up to May, 1919, 370 Doctors made the supreme sacrifice for their country.

In paying tribute to the medical men, who gave their lives while in active service, one thought persists, "Greater love hath no man than that he shall give his life for another." We venerate the memories of those who paid in full, and we have the greatest respect for the others; all were willing to do whatever they were called upon to do, and many of them rendered most valuable service to their country.

PHYSICIANS KILLED IN ACTION.

Baldwin, Joseph F., 1st Lt., M. C.
 Barber, Timothy, L., Capt., M. C.
 Beasley, Shadworth O., Major, M. C.
 Brown, Arthur S., 1st Lt., M. C.
 Brown, Presley R., 1st Lt., M. C.
 Clair, Frederick D., 1st Lt., M. C.
 Craig, William F., 1st Lt., M. C.
 Daniels, Hoddie W., Capt., M. C.
 Dudenhoefer, Joseph E., Capt., M. C.
 Fair, Wilford A., 1st Lt., M. C.
 Finkelberg, Morris, 1st Lt., M. C.
 Fitzsimmons, William T., 1st Lt., M. C.
 Gochnaur, Orlando M., 1st Lt., M. C.
 Hartwig, Gerhard F., 1st Lt., M. C.
 Herrington, William G., 1st Lt., M. C.
 Hudson, William B., Capt., M. C.
 Jett, Richard L., Capt., M. C.
 King, Emil, 1st Lt., M. C.
 Leonard, Jerome M., 1st Lt., M. C.
 Linch, Ballard C., 1st Lt., M. C.
 McQuilan, James A., 1st Lt., M. C.
 Morgan, Harold S., 1st Lt., M. C.
 Murdock, Robert H., 1st Lt., M. C.
 Oglesby, Knowles G., 1st Lt., M. C.
 Post, Dana C., 1st Lt., M. C.
 Reed, Stephen J. H., Capt., M. C.
 Renner, J. W., 1st Lt., M. C.
 Sanders, Frank B., 1st Lt., M. C.
 Saunders, Alonzo W., 1st Lt., M. C.
 Sherwood, Robert A., 1st Lt., M. C.
 Skilling, John G., 1st Lt., M. C.
 Summers, Davis K., 1st Lt., M. C.
 Vermilyea, Sidney C., 1st Lt., M. C.
 Webster, Harrison B., Major, M. C.

PHYSICIANS WHO HAVE DIED OF WOUNDS.

Bass, Urbane F., 1st Lt., M. C.
 Beal, Howard W., Major, M. C.
 Bull, William S., 1st Lt., M. C.
 Burrell, G. O., 1st Lt., M. C.
 Davis, Reese, 1st Lt., M. C.
 Ellis, J. G., Jr., Capt., M. C.
 Faulds, Winfield S., 1st Lt., M. C.
 Frazier, Francis V., 1st Lt., M. C.
 Gibson, Burgess A., 1st Lt., M. C.
 Glascock, Alfred, Capt., M. C.
 Goss, Paul Lewis, 1st Lt., M. C.
 Hanson, Dave T., Capt., M. C.
 Hilgard, George E., Major, M. C.
 Joyce, Whitney H., 1st Lt., M. C.

Klingen, Oscar M., 1st Lt., M. C.
 Lieser, William A., 1st Lt., M. C.
 McMichael, Charles P., 1st Lt., M. C.
 McQuaid, Arthur F., 1st Lt., M. C.
 MacFarland, James, 1st Lt., M. C.
 Marowitz, Max, 1st Lt., M. C.
 Mead, Theodore F., Capt., M. C.
 Mooney, Edward L., 1st Lt., M. C.
 Olstein, Matthew F., 1st Lt., M. C.
 Powers, Ralph E., 1st Lt., M. C.
 Ranson, Glen D., 1st Lt., M. C.
 Ray, John E., Capt., M. C.
 Reed, Clinton V., 1st Lt., M. C.
 Rosenwald, John P., 1st Lt., M. C.
 Ryman, Herbert D., Capt., M. C.
 Sage, Abner P. H., 1st Lt., M. C.
 Shedd, Clyde Everett, 1st Lt., M. C.
 This list is not absolutely accurate.

RED CROSS ARTICLES OF INCORPORATION.

1. The name of the Association shall be the American Association of the Red Cross.

2. The terms of its existence shall be for twenty years.

3. The object of the Association shall be:

First, to secure by the United States the adoption of the treaty of August 22, 1864, between Italy, Baden, Belgium, Denmark, Holland, Spain, Portugal, France, Russia, Württemberg, and the federal council of Switzerland.

Second, to obtain recognition by the Government of the United States and to hold itself in readiness for communicating therewith at all times to the end that its purpose may be more wisely and effectually carried out.

Third, to organize a system of national relief and apply the same as mitigating the sufferings caused by war, pestilence, famine, and other calamities.

Fourth, to collect and diffuse information touching the progress of nursing, the organization of National Relief, the advancement of sanitary science, and their application.

Fifth, to co-operate with all other similar national agencies for the furtherance of the articles herein set forth, in such ways as are provided by the regulations governing such co-operation.

CONTEMPLATED AFTER-THE-WAR ACTIVITIES OF THE AMERICAN RED CROSS.

With the armistice signed and peace assured, the American Red Cross is terminating its extensive war activities and is making plans for the utilization of its strong organization and great resources in a program for times of peace.

There have been suggestions that the American Red Cross will undertake extensive public health activities throughout the United States with special emphasis upon child welfare, tuberculosis, and public health nursing.

Dr. Fred J. Taussig of St. Louis, as spokesman for the American Red Cross before the Chicago Medical Society March 5, 1919, said in substance, that the Red Cross having the money and the organization has definitely in mind the possibility of a health program in peace times. What Dr. Taussig said together with announcements which have appeared from time to time in the public press and coming from presumably authoritative sources, while they have been slightly conflicting in character, indicate that there is a movement on foot to take over in a large measure the work that legitimately belongs to the legally constituted public health agencies.

At the outset it may as well be understood that the Red Cross or any similar organization has not and neither can it acquire governmental powers; the State vests such authority only in legally constituted Boards of Health. The enforcement of all laws, rules and regulation bearing upon public health lies strictly within the jurisdiction of State and municipal health boards; any attempt on the part of self-constituted organizations to practice medicine or to attempt to regulate or enforce sanitary measures would be extra judicial and without authority. This is as it should be and any other arrangement will cause confusion and discord, and discord always brings about inefficiency.

Since the announcement of the preliminary program alluded to, and due no doubt to the definite stand taken by some of the more aggressive health officials, there has been a disposition to modify the original program. From some quarters it has been announced that the local health activities of the Red Cross shall not attempt to supplant public health agencies already

established by law, but that the organization shall co-operate with present existing agencies.

Regardless of its attempt to do public health work legitimately under the jurisdiction of health boards it seems quite certain that the Red Cross will attempt to do a great deal towards developing a public service nursing, particularly in the local communities and in smaller towns.

It has even been intimated that the Red Cross will have one or more nurses in practically every community in the United States. There can be no question but that this great increase in the number of public service nurses can produce results and can be of untold benefit to the people, but the success of the whole enterprise will depend in a large measure upon the tact and judgment with which this nursing service is organized and upon the attitude which this nursing organization assumes towards the duly constituted health authorities and particularly its attitude towards the medical profession.

If organized on a State basis with the nursing service supervised by the State Department of Public Health and the nurses in the individual communities working in close contact and in co-operation with the local health officer, this ambitious peace-time program of the American Red Cross can add materially to the efficiency of public health administration throughout the nation. For the plan to succeed however, supervision by official health agencies is imperative. The promotion of health and the prevention of disease are furthered by broad campaigns of education and by the wise administration of restrictive laws. The extra-governmental health agency has proven a factor in educational campaigns, but to attain its greatest ends, the extra governmental agency must be under the supervision and direction of the official health organization which is charged with the responsibility for health activity and is endowed with legal authority to make its action effective.

Taken all in all, inasmuch as the Red Cross has no authority under its constitution to pay out money for peace time work and neither can it acquire governmental or judicial authority and therefore cannot enforce public health measures, it would seem that its activities along public health lines would result only in a waste of money and necessitate the duplication of work by the regular constituted health agencies, and

that therefor the proper thing for this organization to do would be to confine its activities to the legitimate sphere for which it is organized as shown by section 3, paragraph 3 of the articles of incorporation, namely: to apply relief in mitigating the sufferings caused by war, pestilence, famine, and other calamities.

STATE HEALTH OFFICIALS EFFECT NEW ORGANIZATION

IMPORTANT ACTION TAKEN BY EXECUTIVE COMMITTEE IN CHICAGO

DR. DRAKE HONORED WITH IMPORTANT APPOINTMENT.

At the recent annual meeting of the Conference of State and Provincial Health Authorities of North America, held in Atlantic City, the following officers were elected for the ensuing year, excepting the secretary-treasurer who was elected for a period of three years: President, Dr. W. F. Cogswell, Montana; Vice-president, Dr. Charles F. Dalton, Vermont; Secretary-treasurer, Dr. C. St. Clair Drake, Illinois.

An executive committee charged with the work of carrying out the most important program ever undertaken by the state health executives and authorized to act for all the official state health organizations in the interim between the annual sessions embraces the following: Dr. S. J. Crumbine, Kansas, chairman; Dr. C. St. Clair Drake, Illinois, secretary; Dr. Matthias Nicoll, New York; Dr. W. S. Rankin, North Carolina; Dr. Eugene R. Kelley, Massachusetts; Dr. Arthur McCormack, Kentucky; Dr. James A. Hayne, South Carolina; Dr. R. M. Olin, Michigan; Dr. Ennion G. Williams, Virginia; Dr. W. F. Cogswell, Montana; Dr. Allen W. Freeman, Ohio.

The executive committee met in Chicago, July 27-29, and among other important actions taken were the following:

1. Development of a working program for the coordination of governmental and extra-governmental public health nursing services with supervision by the constituted health authorities, embracing in this plan the proposed Red Cross public health nursing service.

2. Development of a working program for the control of influenza, anticipating a possible re-

currence of an epidemic the coming fall and winter.

3. Condemnation of the commercial showing of motion pictures dealing with sex diseases, especially venereal diseases, under the pretext of public education and urgently recommending the withdrawal of official sanction which may have been given to any such films by the United States Public Health Service and State and Municipal health authorities. The non-commercial showing of such films by regularly constituted health and educational authorities with strict observance of prescribed restrictions was commended.

4. In cooperation with the Council on Health and Public Instruction of the American Medical Association, first steps were taken towards the development of a plan for consolidating the federal health agencies in one department and the enlargement of the scope of federal health activities to meet modern demands. A survey of the entire field of federal public health activities was authorized as a preliminary step.

WHY WE REPEALED THE DENTAL BIENNIAL REGISTRATION LAW

To the Editor: Regarding the repeal of the registration clause in the Illinois State dental law, I will briefly state:

1. How it became a law.
2. Why it was enacted.
3. How it operated.
4. Why it was repealed.

Ten years ago, because the dental profession was infested with illegal practitioners, quacks, and glaring advertisers, the Illinois State Dental Society prepared an amendment to the dental law which became Section 14. This provided for a biennial registration and the payment of a registration fee not to exceed one dollar. All licenses became void unless dentists registered with the Secretary of the Illinois State Board of Examiners.

Provision was made for restoring a license upon payment of a fee of twenty dollars, etc.

Our State Board of Dental Examiners hereby obtained a new and clean record of the licensed dentists in this state, and secondly raised funds sufficient to employ investigators and legal counsel to locate and prosecute illegal practitioners and quacks.

No great criticism developed because of the law—it very materially assisted in “cleaning up” our profession and helped place it on a higher plane. Occasionally good men were “caught” because of neglect to re-register.

The dental profession was content to tax itself for the benefit of the people of this state as long as the funds raised by this special tax inured to its special benefit.

Several years later a law was enacted which provided that all monies raised by taxation go into the general fund of the state treasury.

The budget system was inaugurated and the expenditures of our Board of Dental Examiners were curtailed to the extent that for the few years intervening between the enactment of this law and the establishment of the consolidation act approximately \$8,000 in excess of the funds required for administering the law was paid by the dental profession into the state treasury.

Then, too, under the code which created the Department of Registration and Education which administers the laws of the regulated professions, trades and occupations, the expense of administering the dental law should be decidedly minimized.

A clean record, up to date, of the licensed practitioners is in the office of the Department of Registration and Education.

That department issues every new license and consequently can keep a perfect record. Dentists who leave the state, to practice in some other state, obtain certain credentials from the “Department”; thus it can keep in touch with changes from this source and correct its record. The illegal practitioner or quack is usually located by some neighbor and such neighbor is generally the cause of “bringing him to time.”

The Illinois State Dental Society and its component organizations can and will assist the department in keeping a record of those who leave the profession. There was absolutely no valid argument that was or could be produced to combat our bill asking for the repeal of the biennial registration feature of the law.

It is with regret that I here note that the Department of Registration and Education did strenuously oppose our efforts,—but the excellent work of Representative Jones of Springfield, who introduced this bill, and Senator Clark of Chicago, who was its sponsor in the Senate, sus-

tained by the efforts of the officers, committees, and entire membership of the Illinois State Dental Society, caused this bill to pass without a single dissenting vote in either the House or the Senate.

In spite of this unanimous and decided victory, let it again be noted that the Department of Registration and Education still opposed its becoming a law.

Director Francis W. Shepardson, however, in the last hours before the time limit, withdrew his objections.

Section 14 is repealed; it passed both houses of the legislature without a single dissenting vote and was signed by the Governor. The dentists of this state are free from biennial registration and special taxation. It was a clean, just and victorious fight on a principle which involves all the professions, trades and occupations,—the laws of which, the Department of Registration and Education administers,—the dental profession of Illinois is deeply grateful to the physicians for their energetic protest to the enactment of a bill which would have imposed upon the medical profession a like unjust taxation with its other evils,—and hereby expresses its appreciation and thanks for all they did.

G. WALTER DITTMAR,

President, Illinois State Dental Society.

NOTE.—The doctors of Illinois congratulate the dental profession on their victory. In writing finis to this phase of autocracy, we say: Spare us, oh Lord, from further administration of laws from the dream book and from the schoolmaster in politics.

OUR HEALTH INSURANCE COMMITTEE AGAIN COMPLIMENTED

MEDICAL SOCIETY OF NEW JERSEY. JOURNAL OF
THE MEDICAL SOCIETY OF NEW JERSEY

New Brunswick, N. J., July 12, 1919.

To the Editor: We have a committee of our State Society studying Health Insurance, and I recall the fact that the best report on that subject was given by your State Society committee a few months ago. I have mislaid my copy of it. Could I possibly secure additional copies of your committee's report for our committee to examine?

Yours cordially,

D. J. ENGLISH,

Editor.

Committee on Social or Health Insurance of the Illinois State Medical Society:

Ed. H. Ochsner,	Joseph Fairhall,
George Apfelbach,	S. V. Balderston,
C. A. Hercules,	Cleaves Bennett,
W. F. Burres,	E. W. Fiegendaum,
Henry F. Bunting,	W. D. Chapman,
<i>Chairman.</i>	<i>Secretary.</i>

KEEP YOUR OLD NARCOTIC LICENSES

The natural tendency is to destroy an old license when a new one is issued. In view of the fact that Internal Revenue inspectors lately have asked several druggists to show their narcotic license of 1916 or 1917 we would urge that if you still have these old licenses you hang on to them like grim death.

It will be well to report to the President or Secretary of the State Society or the editor of the ILLINOIS MEDICAL JOURNAL if you have any trouble in this respect.

THE MEDICAL PROFESSION IS EASY

REPEALING OF THE SODA WATER TAX BUT NOT THE UNJUST NARCOTIC DRUG TAX ON PHYSICIANS

Congress has repealed the tax on soda water fountain drinks, and the editor is reliably informed that the Theatre Owners' Association of the country have secured the promise from a sufficient number of the members of the Senate and the House of Representatives to secure the repeal of the war tax on theatre tickets, this being wholly a tax on amusements.

You haven't noticed the repeal of the law which taxes doctors three dollars a year for a public health measure which should be paid by the public.

There is a reason, and here it is: Political power pursues the line of least resistance. The medical profession offers the least resistance. An inferior, insignificant, active minority impresses a legislature far more than a superior, inactive, influential majority. A majority of members of Congress believe that the ethical physicians and surgeons are indifferent, inactive and inoffensive in political and legislative affairs. Hence, they put any old thing they desire over on the doctor.

Why should this be? For some unaccountable reason physicians almost universally feel that matters of public interest, even if vitally important to the medical profession, are contentious affairs, into which physicians have no right to enter; and the result is that the medical profession is obliged to take what may be left when the scramble is over. Looking at the matter from the viewpoint of a past neglected duty one gets the impression that when something is about to be handed out, the mob thinks the medical profession is easy.

A NORMAL SHOE FOR A NORMAL FOOT

Can the shoemaker build a shoe that will keep normal a normal foot? And having built it, will the public be brought to see the beauty of the product?

The Chinese woman with her bound foot excites the derision and pity of the self-complacent Occidental. The American woman with her ridiculous imitation of a horse's hoof excites the derision and contempt of the observant Oriental.

Not so many years ago we gave our admiration to the small, tightly laced waist. Today we laugh at it and tomorrow we shall be equally amused by the pencil-point toes and high heels that tilt the human foot to the angle of a horse's hoof.

Dame Fashion, however, brooks no criticism, so we are told, and neither reason nor health is concerned in her mandates. Yet the Dame must look to her own laurels or she will find herself outlawed by her quondam willing slaves; for the war made low heels beautiful on Fifth avenue and consequently on our own Michigan avenue. If it had lasted a little longer women would, of necessity, have gone the whole way with the shoe problem. The shoes of the future will not be "prescription" shoes; they will not cater to deformities, but they will be built to conform to the normal lines of the foot.

As a result of examination of various groups of girls in different occupations, made in an endeavor to promote health among women, the fact has been forcibly demonstrated that an overwhelming number of women are wearing shoes which with narrow-pointed toes, inflexible shank, and in most cases high heels, pinch the foot, cause bad posture, and so incapacitates the wearer for freedom at work and necessary normal exercise,

all of which affects the general physical condition.

The national board of the Young Women's Christian Associations, through the health division of the Bureau of Social Education, has started a drive to get the normal shoe for American women and to popularize it. The associations have all the health arguments. They have a national membership of four hundred thousand women to listen to them, but they cannot get this shoe without the co-operation of the manufacturers and dealers who make the shoes and determine the styles. To bring about this co-operation, a conference with leading shoe men was held recently at the National Board Y. W. C. A. headquarters in New York.

A proper shoe for man or woman should embrace the following features: A low, broad heel, a snugly fitting heel, an inner edge straight from heel to great toe, room for spread in the metatarsal arch when weight is put on the foot, and a snug arch.

"It is about time such shoes were made in popular quantities and prices, and when they are made physicians should urge their universal wear. Why not get some modern ideas of beauty and health into Dame Fashion's superannuated cranium, and give American women an opportunity to cease imitating the Chinese women and the horse of 4,000 years ago?"

SAD BUT TRUE

The following comment under date of July 17, 1919, sent to the editor of the *New York Times* and signed "Educator," is worthy of special mention as it illustrates beautifully the trend of the times:

FAILING MEDICAL SCHOOLS

SHORTAGE OF PHYSICIANS WILL MAKE ITSELF FELT A
FEW YEARS HENCE

New York, July 17, 1919.

To the Editor of The New York Times:

The article in today's *Times*, discussing the possible suspension of the Medical Department of Fordham University, illustrates how well the author has placed his finger on a very interesting topic. Any educator who has watched the good work of that school in the last few years must have felt the same depression as that of the editor.

In the classes of 1918 and 1919 the graduates of that school have the best record of any of the larger schools in New York State, as determined by the Regents' examinations.

The reason for the failure of this school, as well as for that of many other schools of medicine, is the relatively high cost of education. The cost to the student of a medical education five years ago was practically the same as that of today. Even at that time medical education was reckoned on at an average loss of upward of \$200 by American universities. Today money is worth half or one-third of its value at that time and yet the cost remains the same.

Educators have not raised their tuition fees in medicine because they felt that it was a great hardship even at the present time for the average student of medicine to pay the bare \$250 that covers his annual fees.

The vast majority of those studying medicine are poor boys with little or no financial backing. Rich men's sons seldom study medicine—the work is too hard—the hours are too long—and the returns are not commensurate in a financial way with the effort. The poor boy, on the other hand, by reason of his surroundings of sickness and poverty becomes absorbed with the desire for its betterment. As a result of the high standards of education imposed the annual supply of doctors has steadily decreased.

The American Medical Association has shown that thirteen years ago upward of 13,000 new physicians were licensed to practice each year. Last year 4,175 were licensed. Two years from now not more than 3,000 can be graduated. Whereas, during this period the population of the United States has increased more than one-third—in addition, the demand for individual medical attention has more than doubled.

The cost of medical education has increased because the law requires a larger number of full-time professors and assistants.

According to the information at hand, Fordham University lost over \$325,000 on its Medical School. The war depleted its other income, so that without an endowment the school could not go on.

It may not be known, but more than three-fourths of all the professors in any medical school receive absolutely no money for their work. It is done because they like to teach. Fordham was no exception to this rule, except that there were fewer paid professors than elsewhere.

The shortage of physicians will not be appreciated for a few years and then conditions analogous to the present housing trouble will occur, when medical service will be at a premium.

You have sensed the poor boy's position. It is a distinct loss to the city that this suspension should come at the present time. Many of these boys will be unable to continue the study of medicine because they live at home, and this has made it possible to make the burden less.

Upward of two-thirds of all of the students of medicine, in this as well as in other large cities, have their homes in the city where they study and can only take up medicine because of that fact.

Philanthropists seldom have an eye to the possible benefit of medical education—yet from a broad stand-

point there can be no philanthropy with broader possible end results—because, after all, the greatest study in life is the study of life itself.

POST-GRADUATE MEDICAL INSTRUCTION IN AMERICA

One of the results of the war of immediate interest to the medical profession in America is the changed condition with respect to post-graduate instruction in medicine.

The medical institutions of Europe, like its inns, were organized to accommodate all classes of students. Some well prepared men entered the universities, compiled with the usual admission requirements, presented a satisfactory knowledge of the language of the country and became candidates for the higher degrees. On the other hand, a great army of general practitioners annually applied for post-graduate instruction who really desired "brush-up" courses. Owing to the deficiencies in their early undergraduate education they were attempting to receive "higher" education in subjects of which they were ignorant of the fundamentals.

The great medical centers of the United States, Philadelphia, New York, Baltimore, Boston and Chicago, meet the demands for our medical men in much better fashion than did Germany.

In the graduate departments of the great universities may be found opportunities for the qualified student for intensive work in the special fields of medicine and allied sciences under the tuition of men who have made a name in the world for American science and American methods; and in separately organized courses, a general review is offered to practitioners.

GREEK KING DECORATES AMERICAN NURSES

Eight nurses have been decorated by King Alexander of Greece with the Medal of Military Merit for their work in fighting the typhus epidemic in Macedonia. The eight nurses were:

Miss Sara Addison, Baltimore.

Miss Marie Clauber, Chicago.

Miss Alma Hartz, Davenport, Iowa.

Miss Isabelle Martin, San Francisco.

Miss Emily Porter, Bridgeport, Conn.

Miss Clarissa Blakeslee, Drexel Hill, Pa.

Miss Edith Glenn, Bristol, Pa.

Miss Florence Stone, Plainfield, N. J.

One of the nurses, Miss Blakeslee, was herself stricken with typhus during the epidemic, but has entirely recovered.

In making the presentation, King Alexander spoke feelingly of the ravages of typhus in Macedonia, and his gratitude to his American allies for their work in combating it. Addressing the nurses and the General Staff of the American Red Cross, the king said:

"I want to thank you for what you have done for Greece and for humanity in your work in Macedonia. First of all, you saved from starvation tens of thou-

sands of Greeks who were repatriated from Bulgaria after the armistice. Then your doctors and nurses extinguished the typhus epidemic, which was threatening Greece and all the near East, from the Greek Island to Aegean. You fed and clothed thousands and you stamped out typhus and other diseases among thousands of Greeks refugees from Asia Minor. I shall always remember with gratitude what the American people have done through you in our hour of need. I bid you today, on your departure for Roumania, good-bye and good luck!"

After the ceremony, the American minister presented to the king two of the members of the Red Cross Mission, Maj. Burke C. Hamilton, of Goshen, N. Y., and Maj. Robert Bruce Wallace, of Cleveland.

RELATED RECOGNITION OF MEMBERS OF DRAFT BOARDS

Suitable recognition for members of the medical advisory draft boards is provided for in three measures recently introduced in Congress. A bill introduced by Senator Henderson of Nevada authorizes the President to award brevet commissions and suitable medals to the physicians who assisted in the draft. Senator Randall of Louisiana has introduced a similar measure, as has Congressman Kahn of California, but the Randall and Kahn measures do not provide brevet commissions. In addition to appropriate medals, the thanks of Congress are extended. It is fully expected that one of these measures will be passed at this session, but it is not believed likely that brevet commissions will be favored.

NOTE.—Appropriate recognition will be much appreciated by the thousands of doctors who did efficient work on the draft boards, even if it does come at this late date. Most agencies active during the war were given appropriate recognition instantaneously upon the signing of the armistice.

UNITED STATES PHARMACOPOEIAL CON- VENTION OF 1920. DELEGATES TAKE NOTICE

Article VIII, Chapter I of the By-Laws of the United States Pharmacopœial Convention provides that the president "shall issue, on or about the first of May of the year immediately preceding that of the decennial meeting, a notice inviting the several bodies, entitled under the constitution to representation therein, to send delegates to the next meeting. He shall repeat the notification, eight months later, and shall request the medical and pharmaceutical journals of the United States to publish the call for said meeting."

Article II of the constitution provides: "The members of the United States Pharmacopœial convention, in addition to the incorporators and their associates, shall be delegates elected by the following organizations in the manner they shall respectively provide: Incorporated medical colleges, the medical

schools connected with incorporated colleges and universities; incorporated colleges of pharmacy, and pharmaceutical schools connected with incorporated universities; incorporated state medical associations; incorporated state pharmaceutical associations; the American Medical Association, and the American Chemical Society; provided that no such organization shall be entitled to representation unless it shall have been incorporated within and shall have been in continuous operation in the United States for at least five years before the time fixed for the decennial meeting of this corporation."

Section II of the constitution provides: "Delegates appointed by the surgeon-general of the United States army, the surgeon-general of the United States navy, and the surgeon-general of the United States marine hospital service, the secretary of agriculture, the secretary of commerce and labor, the Association of Official Agricultural Chemists, the Association of State and National Food and Dairy Departments, the National Wholesale Druggists' Association, and the National Dental Association, and by the organizations not heretofore named which were admitted to representation in the convention of 1900, shall also be members of the corporation. Each body and each branch of the United States government above mentioned shall be entitled to send three delegates to the meetings of this corporation. But no such delegates as are provided for in this article shall be members until their credentials shall have been examined and acted upon as provided for by the by-laws."

In the discharge of the above required duties I hereby ask all competent and designated bodies and authorities to name and issue credentials to the fixed number of delegates to the tenth decennial convention to meet in Washington, D. C., on the second Tuesday of May, 1920, at 10 o'clock a. m., at a hall to be designated hereafter. The appointed delegates are requested to promptly forward their credentials to Noble P. Barnes, M. D., the Arlington Hotel, Washington, D. C., assistant secretary of the convention, who will file them for consideration of the committee on credentials which will be appointed by the president not later than March 1, 1920, according to the requirements of Chapter VII, Article I of the by-laws.

Done at Washington, D. C., May 5, 1919.

HARVEY W. WILEY,

President of United States Pharmacopoeial Convention.

CONSTRUCTIONS OF HARRISON ACT

The Circuit Court of Appeals for the Seventh Circuit holds that the provision of section 2 of the Harrison Narcotic Act, after providing that specified narcotic drugs shall be sold on written order forms obtained from the Internal Revenue Department, that "it shall be unlawful for any person to obtain by means of said order forms any of the aforesaid drugs for any purpose other than the use, sale or distribution thereof by him in the conduct of a lawful business in said drugs or in the legitimate practice of his pro-

fession" is unconstitutional, as not within the taxing power of Congress, which includes no right to make any specific use of a tax-paid article unlawful (the rest of the section being held constitutional). It is also held that Rev. Sec. §3236, providing that, whenever more than one pursuit or occupation subject to internal revenue tax are carried on in the same place by the same person, the tax shall be paid for each, requires a separate registration under the Harrison Act by a physician who dispenses and is also a dealer in narcotic drugs, and payment of a separate tax for each; and this is also required by the Internal Revenue regulations.—Blunt v. United States, 255 Fed. 332.

TRI-STATE DISTRICT MEDICAL ASSOCIATION

PROGRAM OF THE ANNUAL ASSEMBLY OF THE TRI-STATE DISTRICT MEDICAL ASSOCIATION TO BE HELD AT ROCKFORD, INCLUDING CAMP GRANT, ILLINOIS,

September 1, 2, 3 and 4, 1919

Headquarters of Meeting: New Woman's Club Building and Theater, Corner of North Church Street and Park Avenue.

The Tri-State District Medical Society (Iowa, Illinois and Wisconsin) extends to the physicians of the Middle West a hearty invitation to be present and participate in the program at the annual assembly of this association held at Rockford, including Camp Grant, Illinois, September 1, 2, 3 and 4.

The territory covered by this organization includes the entire states of Iowa, Wisconsin and Illinois. The word "district" is retained in the name of this society in order to distinguish it from other Tri-State Medical organizations.

This association is purely a scientific body. It assumes no political or legislative duties. The entire time of the annual assemblies outside of social functions, is devoted to orations, addresses, essays, diagnostic clinics and discussions of medical subjects.

The society is chartered under the laws of the State of Illinois and adheres to the code of ethics established by the American Medical Association. *A physician in order to become a member of this association must be in good standing in the County and State societies in the territory in which he or she resides.* It is the sincere wish of this organization that its members also become Fellows of the American Medical Association.

The Tri-State District Medical Association is very fortunate this year in having as its guests some of the most notable men of the profession in this country.

The list of essayists from each of the three states is representative of the very best of the medical profession. Many of these men are physicians of National reputation. Our hope is that the organization may ever have the time on the program taken up with such excellent talent. The diagnostic clinics are always a leading feature at the annual meeting of this society. The clinics are conducted by the eminent men of the profession who have honored the society by their presence as guests. The Rockford physicians are arranging through the committee for an abundance of

material for diagnostic purposes. Physicians from other cities and towns who have interesting or obscure cases are urged to bring them to the clinics. Information may be obtained in regard to the subject by writing Dr. Sanford R. Catlin, Chairman of the Surgical Section, or Dr. Dudley W. Day, Chairman of the Medical Section of the Rockford Committees.

A special invitation is extended to the Doctors' wives, daughters and lady friends to be present. Delightful entertainment will be provided for them by the Ladies' Entertainment Committee of Rockford. The success of the meeting is enhanced largely by the presence of the ladies, so bring them with you, Doctor, and come prepared to stay the whole time of the assembly and particularly to attend the banquet at the close of the meeting. Informal. (This includes the ladies).

(Signed)

William B. Peck, Managing-Director.
Domer G. Smith, Secretary.

Program Committee:

Henry G. Langworthy, Dubuque, Iowa,
Arthur G. Sullivan, Madison, Wisconsin,
Edwin P. Sloan, Bloomington, Illinois.

First Day—September 1, 1919

10:00 to 12:00 a. m.—Registration for Doctors and ladies in Foyer of Theater of Woman's Club Building, Corner North Church Church and Park Avenue.

2:00 p. m.—Automobile Excursion for Doctors and ladies to places of interest including Camp Grant.

2:00 p. m.—Golf Tournament, Rockford Country Club. Doctors please bring their handicap.

7:30 p. m.—Address in Roentgenology. Dr. James Thomas Case, Professor of Roentgenology, Northwestern University Medical School; Battle Creek, Michigan.

8:30 p. m.—Public Lecture to the Physicians and Citizens of Rockford. Subject: The National Welfare. Dr. Victor Clarence Vaughan, President of Michigan State Board of Health, Dean and Professor of Hygiene and Physiological Chemistry, Ann Arbor, Michigan.

Second Day—September 2, 1919

7:00 a. m.—Diagnostic Clinic (Surgical). Dr. Joseph Bloodgood, Professor of Clinical Surgery, Johns Hopkins University, Baltimore, Maryland. Diagnostic Clinic (Medical). Dr. Victor C. Vaughan, Dean of University of Michigan Medical School, Ann Arbor, Michigan. Dr. Christopher Graham, Mayo Clinic, Professor of Medicine, University of Minnesota Graduate School of Medicine, Rochester, Minnesota.

9:30 a. m.—Address of Welcome. Hon. Robert Rew, Mayor of Rockford. Response to Address of Welcome. Dr. Edward Fiegenbaum, Edwardsville, Illinois.

10:00 a. m.—Subject announced later. Dr. Paul Gardner, New Hampton, Iowa.

10:20 a. m.—Empyema as Found in the Army. Dr. Emil Windmueller, Woodstock, Illinois. Discussion led by Dr. Sanford R. Catlin, Rockford, Illinois.

10:40 a. m.—Early Recognition and Treatment of

Intussusception. Dr. Charles Krouse, Cedar Rapids, Iowa. Discussion led by Dr. Geo. V. I. Brown, Milwaukee, Wisconsin.

11:00 a. m.—Address. Dr. Victor C. Vaughan, Dean and Professor of Hygiene and Physiological Chemistry, Ann Arbor, Michigan. Address (subject announced later) Dr. James H. McKee, Philadelphia, Pa.

AFTERNOON SESSION

1:30 p. m.—Neuresthenia. Dr. August Sauthoff, Member Medical Staff Wisconsin State Institution, Mendota, Wisconsin. Discussion led by Dr. Frank I. Drake, Superintendent Wisconsin State Institution, Mendota, Wisconsin.

1:50 p. m.—Some Remarks on Mental Status. Dr. Sidney D. Wilgus, Rockford, Illinois. Discussion led by Dr. Arthur W. Rogers, Oconomowoc, Wisconsin.

2:10 p. m.—Goiter. Dr. Thomas F. Duhigg, Des Moines, Iowa. Discussion led by Dr. Edwin P. Sloan, Bloomington, Illinois.

2:30 p. m.—Address. Dr. Joseph Bloodgood, Professor of Surgery, Johns Hopkins University, Baltimore, Maryland.

Camp Grant Program (At Woman's Club Bldg.)

3:30 p. m.—Address. Colonel Peter C. Field, Camp Surgeon, Camp Grant, Illinois.

4:00 p. m.—Tuberculosis and the Soldier. Major Clarence L. Wheaton, Chicago, Illinois. Discussion led by Dr. Robert S. Berghoff, Chicago, Illinois.

4:20 p. m.—Treatment of Pneumonia with a Specific Serum (Kyes) at Camp Grant. Major Alfred W. Gray, Milwaukee, Wisconsin. Discussion led by Dr. John H. McClellan, Chicago, Illinois.

1:35 p. m.—The Dietetics of the Severer Digestive Disorders of Infancy. Dr. James W. Van Derslice, President Illinois State Medical Society, Oak Park, Illinois. Discussion led by Dr. Jacob Carl Krafft, Chicago, Illinois.

1:55 p. m.—Catharsis Following Abdominal Operations. Dr. John F. Herrick, Ottumwa, Iowa. Discussion led by Dr. William L. Karcher, Freeport, Illinois.

2:15 p. m.—Suggestions for the Treatment of Fractures of the Radius and Ulna at the Middle Third. Dr. Charles H. Lemon, Milwaukee, Wisconsin. Discussion led by Dr. James P. Dean, Madison, Wisconsin.

2:35 p. m.—Address. Dr. Edward Carl Rosenow, Mayo Clinic, Professor of Bacteriology, University of Minnesota Graduate School of Medicine, Rochester, Minnesota.

3:35 p. m.—Lesions of the Cervical Sympathetic with Report of Three Cases. Dr. Tom B. Throckmorton, Secretary Iowa State Medical Society, Des Moines, Iowa. Discussion led by Charles R. Bardeen, Dean and Professor of Anatomy, University of Wisconsin, Medical School, Madison, Wisconsin.

3:55 p. m.—Reciprocal Relation of Wisconsin with her Neighbors. Dr. John Morris Dodd, Ashland, Wisconsin. Discussion led by Dr. E. B. Coolley, Danville, Illinois.

4:15 p. m.—Address. Dr. Hugh Cabot, Professor of

Surgery, Medical School of Harvard University, Boston, Massachusetts.

EVENING SESSION

7:00 p. m.—Address. Dr. Fred H. Albee, Professor of Orthopedic Surgery, New York Post-Graduate School of Medicine, New York City.

8:00 p. m.—Empyema. Dr. Joseph Dean, Madison, Wisconsin. Discussion led by Dr. Robert S. Van Valzah, Associate Professor of Clinical Medicine, University of Wisconsin Medical School, Madison, Wisconsin.

8:20 p. m.—Fixation of the Cecum (Lantern Slide Demonstration). Dr. Clifford U. Collins, Peoria, Illinois. Discussion led by Dr. Roland Hazen, Paris, Illinois.

8:40 p. m.—The Surgical Importance of Non-Rotation of the Colon During Its Development. (Lantern Slide Demonstration). Dr. Frank Buckmaster, Effingham, Illinois. Discussion led by Dr. Wilson Cunningham, Platteville, Wisconsin.

9:00 p. m.—Address. Dr. Dean DeWitt Lewis, Associate Professor of Surgery, Rush Medical College, Chicago, Illinois.

Smoker.

4:40 p. m.—Chronic Gas Poisoning, Based on Observation of Two Thousand Cases. Captain Robert S. Berghoff, Chicago, Illinois. Discussion led by Dr. John F. Herrick, Ottumwa, Iowa.

5:00 p. m.—Luncheon at Country Club for Doctors and their ladies.

EVENING SESSION

7:00 p. m.—Motion Pictures.

7:30 p. m.—Address. Dr. Christopher Graham, Mayo Clinic, Professor of Medicine, University of Minnesota, Graduate School of Medicine, Rochester, Minnesota.

8:30 p. m.—The Diagnosis and Treatment of Gastric and Duodenal Ulcers. Dr. Eber F. Stevenson, Waterloo, Iowa. Discussion led by Dr. Joseph W. Rowntree, Waterloo, Iowa.

9:00 p. m.—Address. Dr. Frederick Atwood Besley, Professor of Surgery, Northwestern University Medical School, Chicago, Illinois.

Third Day—September 3, 1919

7:00 a. m.—Diagnostic Clinic (Surgical). Dr. Hugh Cabot, Professor of Surgery, Medical School of Harvard University, Boston, Massachusetts. Diagnostic Clinic (Medical). Dr. Solomon Solis Cohen, Professor of Medicine, Jefferson Medical College, Philadelphia, Pa.

9:30 a. m.—Blood Pressure Conditions as Studied by a General Practitioner. Dr. Frank T. Hartman, Waterloo, Iowa. Discussion led by Dr. Walter H. Sheldon, Madison, Wisconsin.

9:50 a. m.—Compulsory Health Insurance. Dr. Elmer B. Coolley, Danville, Illinois. Discussion led by Dr. John R. Ballinger, Chicago, Illinois.

10:10 a. m.—Business Evolution and the Future of Private Medical Practice. Dr. William E. Fairfield,

Green Bay, Wisconsin. Discussion led by Dr. Theodore J. Redelings, Marinette, Wisconsin.

10:30 a. m.—The Ophthalmologist and Otologist Retrospectively and Prospectively Considered. Dr. J. Sheldon Clark, Freeport, Illinois. Discussion led by Dr. Joseph C. Beck, Associate Professor of Surgery (Ear, nose and throat) University of Illinois, College of Medicine, Chicago, Illinois.

10:50 a. m.—Address. Dr. Solomon Solis Cohen, Professor of Medicine, Jefferson Medical College, Philadelphia, Pa.

AFTERNOON SESSION

1:15 p. m.—Intestinal Obstruction with Unusual Complications. Dr. John R. Guthrie, Dubuque, Iowa. Discussion led by Dr. Thomas W. Nuzum, Janesville, Wisconsin.

Fourth Day—September 4, 1919

7:00 a. m.—Diagnostic Clinic (Surgical). Dr. George Washington Crile, Professor of Surgery, Western Reserve University, School of Medicine, Cleveland, Ohio. Dr. Albert John Ochsner, Professor of Surgery, University of Illinois, College of Medicine, Chicago, Illinois. Diagnostic Clinic (Medical). Dr. William Sidney Thayer, Professor of Medicine, Johns Hopkins University, Medical Department, Baltimore, Maryland.

9:45 a. m.—Shock in Theatre of Operation and Advancement Zone in War, a Few Observations. Dr. Donald McCrae, Jr., Council Bluffs, Iowa. Discussion led by Dr. Dean DeWitt Lewis, Chicago, Illinois.

10:00 a. m.—Application to Civil Practice of Principles Disclosed in the Treatment of Thoracic War Injuries. Dr. John L. Yates, Professor of Clinical Surgery, Marquette University, Milwaukee, Wisconsin. Discussion led by Dr. Louis M. Warfield, Professor of Clinical Medicine, Marquette University, School of Medicine, Milwaukee, Wisconsin.

10:25 a. m.—The Doctor and Public Health. Dr. C. St. Clair Drake, Director, Illinois Department of Public Health, Springfield, Illinois. Discussion led by Dr. Victor C. Vaughan, Professor of Hygiene and Physiological Chemistry, University of Michigan, Medical School, Ann Arbor, Michigan.

10:45 a. m.—Address. Dr. Albert John Ochsner, Professor of Surgery, University of Illinois, College of Medicine, Chicago, Illinois.

AFTERNOON SESSION

1:00 p. m.—Some Points on Prostatectomy, with Special Reference to Its after Treatment. Dr. Dennis J. Hayes, Professor of Genito Urinary Surgery, Marquette University, School of Medicine, President Wisconsin State Medical Society, Milwaukee, Wisconsin. Discussion led by Dr. Emerson A. Fletcher, Milwaukee, Wisconsin.

1:20 p. m.—Address. Surgeon General Merritte W. Ireland, U. S. Army, Washington, D. C.

2:30 p. m.—Address. Dr. William Sidney Thayer, Professor of Medicine, Johns Hopkins University, Medical Department, Baltimore, Maryland.

3:40 p. m.—Address. Dr. George Washington Crile, Professor of Surgery, Western Reserve University, School of Medicine, Cleveland, Ohio.

Some time during the four days Dr. Henry G. Langworthy, Dubuque, Iowa, will present a paper on the subject "Our Society Endowment Fund."

BANQUET 6:30 P. M.

ADDRESSES

Major General Leonard Wood, United States Army.
Eminent men of the profession who are guests of the Association and other distinguished citizens of the United States.

Presidents of States Societies.

Wisconsin—Dr. Dennis J. Hayes, Milwaukee.

Iowa—Dr. William L. Allen, Davenport.

Illinois—Dr. James W. Van Derslice, Oak Park.
(Signed)

William B. Peck, *Managing Director*.

Domer G. Smith, *Secretary*.

Program Committee

Henry G. Langworthy, Dubuque, Iowa.

Edwin P. Sloan, Bloomington, Ill.

Arthur G. Sullivan, Madison, Wis.

Public Health

NEW HEALTH LEGISLATION

While a large number of measures having to do with health and public welfare failed in passage in the 51st General Assembly, a considerable number of such bills were passed and have been approved by Governor Lowden.

The principal measures of this character are the following:

Senate Bill No. 225: To establish a State Sanitarium for Women and provides that all women above the age of 18 whose offenses are punishable by confinement in the county jail, shall be committed to such sanitarium. The institution will be operated by the Department of Public Welfare.

Senate Bill No. 253: Authorizes counties to segregate and treat persons suffering from communicable venereal diseases.

Senate Bill No. 418: Amends the 1908 law relative to municipal tuberculosis sanatoria reducing the tax from one mill to three-quarters of a mill.

Senate Bill No. 449: Authorizes the Department of Public Welfare to engage in the rehabilitation of physically handicapped persons and to establish a school of rehabilitation.

Senate Bill No. 546: Reduces the limit of tax for municipal tuberculosis sanatoria in cities of less than 100,000 population from two mills to one and one-third mills.

Senate Bill No. 553: Amends the law of 1917 for the organization of public health districts by reducing the limit of tax for such purposes from three mills to two mills.

Senate Bill No. 563: Authorizes cities of less than 100,000 population to establish public comfort stations and to levy a tax of not to exceed one and one-third mills after referendum for this purpose.

House Joint Resolution No. 14: Designates the week beginning on the second Sunday in May in 1919 and 1920 as Health Promotion Week and directs its observance.

House Bill No. 4: Similar to Senate Bill No. 563, authorizing establishment of public comfort stations.

House Bill No. 42: Authorizes city councils by a two-thirds vote to borrow money to meet the expense of accidents, casualties and epidemics.

House Bill No. 271: Amends the law relating to coroners. Provides that coroners may call a physician to examine the body of a deceased person when the cause of death is supposed to be violence or of criminal character, and to cause autopsies to be made when necessary. Requires the coroner to conduct post-mortem examinations when death is presumed to be due to crime, but provides that autopsies shall not be held except as provided by law.

House Bill No. 328: Amends the Act establishing a surgical institute for children and provides that children under the age of sixteen may be admitted. The institution is under the control of the Department of Public Welfare.

House Bill No. 484: To validate the educational qualifications of applicants for licenses or registration in Illinois, when such applicants have attended a school in good standing during first three years, but not in good standing during the fourth year.

HEALTH SURVEY IN EAST ST. LOUIS

In conjunction with the War Civics Committee, appointed by the War Department, the State Department of Public Health, through its Division of Surveys and Rural Hygiene, is conducting a thorough health survey in the city of East St. Louis. The field work is being carried on by Paul L. Skoog, Chief of the Division of Surveys and Rural Hygiene, with the co-operation of the Division of Child Hygiene and Public Health Nursing, Tuberculosis, Sanitation, Vital Statistics, Communicable Diseases, and other divisions of the State Health Department. A special survey of Tuberculosis will be carried out by the Division of Tuberculosis in conjunction with the National Tuberculosis Association which has made a special financial grant for this purpose.

East St. Louis is an industrial city presenting many complex problems due to peculiar sanitary conditions, the large numbers of negroes and persons of foreign birth, and to the absentee landlord. The city has grown more rapidly than any city in Illinois, having increased in population from 58,000 to 92,000 during the past eight years.

On account of the complex conditions existing, the War Civics Committee was created and was financed through a fund of \$200,000.00 raised by the residents of the community.

As a result of the health survey, it is expected that the local health department will be completely reorganized on a departmental basis, and that many important municipal health activities will be established.

The East St. Louis survey is the sixth important survey to be carried out by the State Department of Health during the past two years. On the completion of the East St. Louis survey a similar survey will be made in the city of Alton.

POSSIBLE RECURRENCE OF INFLUENZA

In view of the recognized possibility that influenza will recur in epidemic form during the coming autumn and winter, extensive plans are being made by the State Department of Public Health and by the American Red Cross to adequately meet all of the needs of such an emergency. The American Red Cross will be prepared to furnish nurses to be sent into communities which may be afflicted and will also have on hand supplies which may be necessary for the establishment and equipment of emergency hospitals.

The State Department of Public Health is arranging for the mobilization of medical emergency forces and contemplates the employment of local physicians for this purpose under the State and county collaborating health service.

NEW CIRCULAR ON THE CARE OF BABIES

A new thirty-two page circular on the care of babies is being issued by the State Department of public health for free distribution. While somewhat similar to the circular issued in 1917, this pamphlet has been entirely rewritten and contains a large amount of entirely new material. It is expected that the pamphlet will have very wide circulation in connection with the Child Welfare activities which are being promoted in many sections of the State.

PUBLIC HEALTH ACTIVITIES AT THE ILLINOIS STATE FAIR

The health exhibits of the State Department of Public Health at the Illinois State Fair to be held in Springfield during August, will be much more extensive than ever before. The Baby Health Conference which has been a feature of the Fair for a number of years past, is being developed on a larger and broader scale than ever before. Among the special features of the general exhibit this year will be a model nursery, demonstrations of all phases of health work, special venereal disease exhibits for men and women, generous employment of motion pictures and automatic stereopticons and several mechanical devices.

The Director of the Department of Public Health has been made Superintendent of public health for the State Fair, and all of the Division Chiefs will be present throughout the Fair for the purpose of consultation with visiting health officers and physicians. A cordial invitation is extended to health officers and doctors to make the offices of the State Department of Health at the Fair grounds their headquarters.

MORTALITY DATA FOR 1918

For the first time in the history of Illinois, accurate mortality figures are now available for public and official information. These improved records are made possible through a more satisfactory vital statistics law and through the higher degree of efficiency made possible under the Civil Administrative Code. From the statistics for 1917 and 1918 that have just been completed, it is found that during 1918 there were 103,138 deaths in the State and that 44,605 of these deaths occurred in the city of Chicago. The death rate for the State as a whole was 16.3 per thousand of population. The deaths during 1918 exceeded those of 1917 by over 18,000, this increase being attributed to a large extent, to the influenza pneumonia epidemic of last autumn which was responsible for 32,334 deaths. There were 17,879 deaths ascribed to influenza and 14,445 due to complicated pneumonia.

It was found that there were 341 deaths in 1918 due to measles, twenty-five times as many as died from smallpox and more than twice as many as died from scarlet fever.

There were 533 deaths from typhoid fever, only 38 of which occurred in the city of Chicago with 495 in the rest of the state. The typhoid death rate outside of Chicago was ten times as high as the Chicago rate. Through adequate consideration of sanitation measures, Chicago has now attained the lowest typhoid death rate of any large city in the civilized world.

Deaths reported from other communicable diseases are as follows: tuberculosis 7,619, smallpox 14, scarlet fever 154, infantile paralysis 144, epidemic meningitis 164, malaria 17, and diphtheria 1,152.

The diphtheria mortality is regarded by the State Department of Public Health as inexcusably high inasmuch as diphtheria antitoxin is supplied free to all persons in the state and is made available through five hundred distributing stations.

COUNTY COLLABORATING HEALTH OFFICERS

The State Department of Public Health is again urging all county medical societies to make nominations of representatives on the state and county collaborating health service with at least one county collaborating health officer in each county. This service has been pretty well organized in many sections of the state, but there are still some counties in which the county medical societies have not acted.

County collaborating health officers will report to the State Department of Public Health and in the absence of full-time medical health officers or in the face of emergency will be called upon to act for the state, compensation being made on a reasonable per diem basis. It is the plan of the Department to have conferences from time to time at which all the collaborating county health officers will be present and where the more recent advances in preventive medicine will be taught and demonstrated by specialists and authorities on these particular subjects. One of the duties of the county collaborating health officer will be to pre-

sent to his county medical society the results of these conferences.

MOTION PICTURE FILM SERVICE

The State Department of Public Health is now prepared to furnish motion picture films and motion picture machine and operator for the uses of county medical societies. When public meetings are arranged under the auspices of county societies, the Department will assist in every way possible. On account of the large number of requests for this motion picture service, county societies are asked to communicate with the State Department of Public Health as far in advance of their meeting as may be possible so the reservations of machines and operators can be made.

COMMUNICABLE DISEASES FOR JULY

During July there has been noted a decided increase in the number of cases of poliomyelitis. The larger number of these cases being reported from Chicago and the Northern part of the state. During the month, five cases of poliomyelitis were reported from Standard, Putnam County, with two deaths. It is an interesting coincidence that the first case of poliomyelitis in the epidemic beginning three years ago was reported from the same town and by the same physician.

A rather serious epidemic of scarlet fever developed in Morris, Grundy County, with seventeen cases reported within one week.

Typhoid fever was more prevalent during July in several sections of the state than at any time for a number of years past. A number of cases were reported from Mount Carmel, Allendale, and Bellmont in Wabash County, and at Stonefort, Saline County.

The State Department of Public Health is urging the more general use of typhoid-para typhoid vaccines as means of immunizing against the disease.

Correspondence

WHY NOT A DOCTOR'S UNION?

Chicago, Ill., July 20, 1919.

To the Editor: Free consultations, advice and prescriptions in the columns of the daily press. Free Wassermanns, free salvarsans, free medical treatment of all kinds for the affluent. Pitiful salaries for public medical officers; free medical services to the government, and as yet no free food, free raiment or free rent for the doctor. The doctor pays the same taxes as the next fellow (note the "excess profits tax" of last year) and his funeral is just as expensive as is a layman's. Similar conditions in labor circles would cause a few bloody riots. "Scab" labor is not popular.

But labor soon cures such ills. Why? Because

labor is organized and its votes command respect.

It is true that small groups of doctors occasionally do organize and get behind one or another candidate in election. If these men were asked why, the majority of them could not give an intelligent answer. The interested few would not answer, or at least truthfully. Did any one ever hear of the profession organizing itself politically and getting behind a big principle in the interest of the profession as a whole? Individual doctors get behind candidates for public office, it is true, but rarely on principle. Most of these medical men bob up in politically filled offices later on.

A certain medical gentleman in high political office once said, "The doctors can go to hell." This gentleman knew the spirit of the public and he also knew the medical profession.

If the doctors of this country ever intend to strike for their rights, now is the time. The profession has just demonstrated that, in the last analysis, it is the most useful of all professions. Governments are so crude and reversionary that they cannot sustain themselves without war, and—no doctors, no army. The government now might listen to us if we hurried.

All of which is purely gratuitous and supererogatory.

Why seek for an *esprit du corps* in the doctor, who, being the only known organism that has not the instinct of self-preservation, consequently is the humblest creature of which biology takes cognizance.

Not only does the doctor lack the instinct of self-preservation, but he evinces great activity in legislating against himself. N. B. If a practitioner of repute in his own state wishes to practice in another, in which there is no reciprocity, he is confronted with an examination—often at the hands of men who could not even formulate their own questions, much less answer them, without the aid of a medical library. All the same, the United States government drew no lines of discrimination against any state or method of licensing when physicians were needed for the army.

The present trend toward social upheaval suggests that the doctors would better "get in out of the wet." A doctor's union might enable us to pass as "wage earners." This would be a big

concession on the part of the public, which is slow to admit that a doctor ever earns anything, even gratitude. What is still more pertinent, it might prevent the doctor from being classified as bourgeois. Events might so shape themselves that such classification would be dangerous to the profession.

But "What's the use?"

G. FRANK LYDSTON.

PRACTICING MEDICINE UNDER A COMMISSION, LIKE PUGILISM, RACE TRACK GAMBLING, VICE CONTROL, ETC.

NARCOTIC PROBLEM AND THE LAW

117 West Seventy-sixth Street,
New York, July 12, 1919.

To the Editors:

Many physicians are refusing to prescribe narcotics owing to the danger and disrepute now attached by law to the legitimate use of these agents. They are doing this even at the risk of the suffering entailed upon their patients in order to compel attention to the necessity for the repeal of a law which places the practice of medicine in this State under a commission like pugilism, race track gambling, vice, and the public utilities.

The following comment appeared in the *New York Tribune* on July 6, 1919:

"It was also announced by State Commissioner Herrick that summonses for nearly eight thousand delinquent physicians, druggists, and veterinarians authorized to dispense narcotic drugs and who failed to register with the State Department of Narcotic Drug Control on or before July 1st will be obtained from magistrates throughout New York State beginning next Thursday. . . . Of the 17,000 physicians,

dentists and veterinarians who are required to register, only 8,000 have complied with the law," said Commissioner Herrick. "I attribute the failing of the doctors to re-register to the fact that many are out of town. Some undoubtedly have been careless, but some probably are antagonistic to the law and these must be compelled to conform to the law."

It is said that "ignorance of the law excuses no one but the lawyer."

Commissioner Herrick, a lawyer as well as narcotic drug commissioner, is in error when he states that "doctors are required to register under this law." They are required to do so only in order to prescribe what the law calls habit forming drugs.

JOHN P. DAVIN, M. D.

Last year we called them war gardens. This year they are peace gardens; and with just as much need for them as there was for the war gardens of 1918.

Playgrounds are always supplied with plenty of fresh outdoor air and sunshine. This is why they are fine for children, who should be encouraged to play out of doors whenever they can.

Society Proceedings

THE CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otolological Society was held on Tuesday, December 17, 1918, at the Hotel La Salle at 8:15 p. m.

The Vice-President, Dr. Charles H. Long, in the chair.

Dr. Harry Kahn presented a new otoscope.

Dr. L. W. Dean, Iowa City, Iowa, exhibited a specimen of a brain which showed an abscess of the cerebellum and a tumor at the cerebello-pontine angle. He was interested particularly in the case because it had been possible to positively demonstrate before death the definite symptoms of acute suppurative of the labyrinth and of the cerebellar lesion in the same patient. Operative procedure and post-mortem examination confirmed the diagnosis which was made of the intracranial cerebellar lesion and the abscess as well. The patient had an acute labyrinthitis and a tuberculo of the angle, with an abscess of the cerebellum.

The diagnosis was based on the presence of nystagmus of two types, the cerebellar and the labyrinthine. There was also a falling in the direction of the lesion irrespective of the position of the head.

Dr. L. W. Dean also presented a paper entitled, "The Proper Procedure for External Drainage of Retropharyngeal Abscess Secondary to Caries of the Vertebrae."

The author stated that since this procedure was demonstrated to him a number of years ago by Professor Prentiss, he had proved to his complete satisfaction both the simplicity and practicability of the operation. In his opinion, not only should every case of retropharyngeal abscess which was secondary to caries of the vertebrae be drained externally, but every case of retropharyngeal abscess should be drained in that way. There was no reason why the operation should cause shock of any importance, even with a child that was suffering from extreme toxemia. By this method the pus discharged externally and not into the respiratory and alimentary tract, where it was liable to do much damage. The external operation was also indicated because of the fact that the infection of the retropharyngeal space extended in to vertical direction, between the fascial planes. It might reach from the basilar process of the skull to the upper part of the thorax. When the external operation was performed, the finger was introduced into the retropharyngeal space and the extent of the abscess cavity could easily be determined. Drainage tubes could be inserted as high up as the base of the skull, or as low as the clavicle if such a procedure was indicated, and the drainage secured in this way was far superior to that obtained from the stab operation on the posterior wall of the pharynx.

The operation did not necessitate the incision of any muscle except the platysma. The incision should extend through skin, platysma and vaginal fascia. No

careful dissection was necessary; it was simplicity itself and could be performed almost altogether with the index finger.

The operation was described in detail and the paper was accompanied by drawings which illustrated clearly the anatomical conditions met with.

DISCUSSION

Dr. Alfred Lewy asked if after they were through the fascia all the rest of the operation was done with the finger.

Dr. Dean replied that he went in with the finger and found the abscess, which was just like a full bag in front of the finger, and then inserted any blunt instrument which would not do a damage and lacerated the sac.

Dr. Harry Kahn was not sure whether he had understood Dr. Dean to say that all retropharyngeal abscesses should be drained externally. In some experience with such abscesses he had used an opening through the mouth, but with blunt artery forceps, as recommended by Abt. His practice has been to make the opening, using the finger first as a guide, and then pressing the forceps into the mass, opening them and allowing the pus to flow out. The child was held with the body raised and the head down. No difficulty had ever arisen from the aspiration of pus. The child was put to bed with the head down and kept in that position until the abscess completely drained. Good results had been obtained by this method, and he did not remember any ill results. The patients recovered in a few days and the glands disappeared. Occasionally a case had required a second stab, and once in a great while a third, but they had had no fatality.

Dr. Robert Sonnenschein understood that the paper referred to cases where there had been caries of the vertebrae and not to ordinary abscesses.

It was important to remember that in retropharyngeal abscesses the pus might be differently located, depending on the origin of the infection.

In the usual cases the abscess arose from infected lymph glands lying in the region of the pharynx. In such instances the pus formed between the prevertebral muscle and the pharyngeal mucosa and tended to point toward the pharynx. The treatment there, of course, was opening the abscess by the usual incision in the throat. But where a caries of a vertebral body was the cause of the pus, and the pus was behind the prevertebral muscles and might burrow towards the mediastinum, the operation so well described and perfected by Dr. Dean ought, it seemed, to be decidedly indicated.

Dr. Dean stated that the title of the paper conveyed that impression, but that in the course of it he had stated that as the procedure was so simple, in his judgment it was the best, and he was opening all retropharyngeal abscesses by the external route. He did not wish to make this a dogmatic statement because so many men with much experience were doing the internal operation.

Dr. A. A. Hayden thought the presentation of the subject of retropharyngeal abscess that Dr. Dean had given the Society was indeed interesting. The advantage of this method in the treatment of abscesses lay down, especially when they were large and accompanied by bone necrosis, was obvious.

Where the abscess was located higher up, however, the old method of incision through the mouth was a satisfactory and safe surgical procedure, if done under proper precautions. Most important among these were the use of an efficient suction machine and the immediate lowering of the head (if a child, holding up by the heels), so that none of the pus could be aspirated into the lungs to invite a septic aspiration pneumonia.

Dr. J. Gordon Wilson said the Society was indebted to Dr. Dean for the history and post-mortem findings of this interesting case. It presented a distinct lesion of the peripheral end organ of the right VIIIth nerve and a tumor of the right cerebello-pontine angle with changes in the cerebellum. There was a combination of cerebellar nystagmus and labyrinthine nystagmus. It was now generally accepted by physiologists and neurologists that the cerebellar and labyrinthine types differed, as Dr. Pike and Dr. Wilson demonstrated some years ago. In the labyrinthine nystagmus one saw the slow quick type and

in the cerebellar the ataxic type. The difficulty was that in so many of the clinical cases of tumor there was a combination of the two. This case showed how a careful observer could arrive at a clear view of what was present. Dr. Wilson had for many years used glasses of 18 diopters to cut out fixation and more easily differentiate the two types. Dr. Dean was puzzled as to why the patient lay on the right side, but it might be assumed that he was most comfortable on that side—that there the vertigo was at its minimum. Dr. Wilson recalled to Dr. Dean's attention his experimental findings were (a) the left half of the cerebellum was removed and (b) the left labyrinth was removed. As a rule, in the former the animal preferred to lie on the right side and in the latter on the left. This case furnished interesting information which, as Dr. Dean showed, must be interpreted in the light of physiological knowledge.

Dr. Wilson never had been called on to operate on a case of caries of the vertebrae. However, within the last two years, as an otologist, he had been able to diagnose two cases of early vertebral caries on account of pain in the ear. It should not be astonishing to find that pain in the ear might be an early symptom of caries, since fibers of the second cervical nerve are distributed to the region of the ear.

Dr. Otto J. Stein was reminded by Dr. Wilson's remark concerning pain in the cases of beginning vertebral caries of a case he had of retropharyngeal abscess due to middle ear involvement, which was a well known condition, but he did not believe it had been touched upon. It was possible for such an abscess to form behind the vertebrae, where it could dissect its way down, following the canal and going in behind the fascia. That type of abscess should be borne in mind in these cases. He complimented Dr. Dean upon his method of procedure and thought it was one of the greatest advances in the treatment of retropharyngeal abscesses. He considered the points brought up by Dr. Wilson exceedingly interesting.

Dr. Robert Sonnenschein asked whether Dr. Dean curetted the bodies of the vertebrae.

Dr. Charles H. Long inquired as to whether any effort had been made to determine the cause of the caries and how long it took for it to clear up.

Dr. Dean, closing, said his only excuse for giving this paper at this time was because a recent article in an English Journal had seemed to him so erroneous. He had had it in mind for three or four years and after reading this article had decided to present it at this time. All of their cases had been secondary to bone tuberculosis and came from the orthopedic department, where they had been treated for that disease. They had not curetted the bodies of the vertebrae in any case, but simply inserted the drainage tube. Most of the cases had disappeared from their service or had died with the usual symptoms. The fact that these did not clear up, but kept constantly discharging illustrated to him the necessity of doing an external operation for tuberculous processes. He had seen cases of tuberculous caries that had been opened into, that for months and months continued to discharge tuberculous material into the pharynx, which was very bad for the patient. A suggestion was made that they go to the bottom of the abscess. When they go in they find that they can go to the top and bottom with the finger, and sometimes drainage tubes were placed both up and down. Very frequently the abscesses extended much further than was suspected preceding operation.

Dr. Austin A. Hayden read a paper entitled "The Ear, Nose and Throat Examinations of Aviators, With Special Reference to the Technic of vestibular Reaction."

The report was made for a two-fold purpose:

(1) To give those who expected to do the work some of the more important technical details that had been elaborated and which had enabled them to carefully examine as many as sixty applicants in a single day.

(2) To further stimulate interest in the functional tests of the semi-circular canals. This field, though

old, had never been widely explored until the war created a national demand for the work Jones had systematized and put to practical use.

The applicants had been almost without exception the finest type of red-blooded young American manhood and the percentage of rejections had, consequently, been very small. There was no malingering to escape service, but many had tried, to "get by" with disqualifying defects.

The routine eye, ear, nose and throat examination embraced the history of any ear, nose and throat trouble, including head injuries and dizziness from all causes; examination of nose, throat, naso-pharynx, external auditory canal, tympanic membranes, cochlea; test of hearing by whisper and watch; semi-circular canals, equilibration by rotation tests, caloric tests, nystagmus, vertigo, past-pointing, falling. These examinations were most carefully carried out. Tonsillectomies were required of three classes of men: (1) Those who had had recurrent tonsillar infections as often as once a year. (2) Those whose tonsils were obstructive. (3) Those from whose tonsils free pus could be expressed in considerable quantities. On this basis about 5 per cent of the men were operated upon.

For hearing 20/20 was required for the high and low whispered tones and 40/40 was considered normal for the watch, or possibly a smaller fraction if the whisper had showed full 20/20.

Both spontaneous and induced nystagmus were tested for, the nystagmus referred to being the after-nystagmus of the second degree. No after-after-nystagmus has been seen. Pierce had observed that nystagmus stopped with vomiting. The author, in douching etherized patient's ears, had seen the ocular deviation disappear when emesis occurred.

In counting and recording past-pointing, the following sources of error were noted: (1) Fast-pointings; (2) cross cutting; (3) preconceived ideas as to just how the pointing should be done; (4) prolonged turning. Strict silence and rigid discipline aided greatly in doing rapid, accurate work.

Of the 3,748 applicants only 142 were rejected for abnormalities of the Kinetic Static Sense; of these 118 failed in past-pointing, 17 in nystagmus and 7 in falling; 22 men were nauseated and 31 more vomited. Of the total number examined 692 were rejected as being unfit to become flyers, while 3,056 were pronounced about 100 per cent physically perfect by the examining unit. The disqualification percentage for all causes was 18.04 per cent.

FULTON COUNTY.

The eighty-seventh meeting of the Fulton County Medical Society was called to order at 2:00 p. m. July 1, by President Oren in the parlor of the Y. M. C. A. in Canton.

Dr. R. E. Adkins of Springfield gave some excellent instructions in examining the chest for early diagnosis of tuberculosis. Several patients had been brought in and a very instructive clinic was held by Dr. Adkins.

It was decided to hold a special picnic meeting at Bernnadotte at a time to be set by the president and secretary later.

On motion the secretary was instructed to invite Dr. Adkins and companion, the officers of the County Red Cross Society, the officers of the County Tuberculosis Association and the County Sanatorium Committee to the Special Meeting at Bernnadotte.

A communication from the National Health Service was read conveying the information that this service was prepared to take care of any disabled soldiers, sailor, marine or military nurse who required hospital care and physicians were requested to notify them of any such patients that came to their notice.

Dr. Davis, of Avon, gave an excellent paper on "The Practice of Medicine in the Country," which was freely discussed.

A unanimous vote of thanks was tendered Drs. Adkins and Davis.

Dr. Adams moved that a County Fee Bill be adopted. Carried.

On motion the President appointed the following to draft a County Fee Bill and report at the Annual Meeting in October, Drs. Adams, Chapin, McCumber, Crouch, and Connelly.

Fifteen members and two visitors were present.

D. S. RAY,
Secretary.

MADISON COUNTY.

Our June Meeting.

The Madison County Medical Society met at Elks' Club, in Granite City, on the afternoon of June 6, 1919, with President Dr. Chas. R. Kiser in the Chair.

Seventeen members and three visitors were present.

The minutes of the last meeting were read and approved. Drs. James E. Watson and Maurice R. Williamson, both of Alton, were elected to membership.

An invitation from Dr. Geo. A. Zeller, to hold a meeting at the State Hospital, was unanimously accepted for the afternoon of June 27, 1919. Senator Bardill's letter on osteopathic legislation was read and ordered filed.

Dr. B. H. King made a report of a visit made by him and Dr. Chas. R. Kiser, to the legislative committee with reference to the chiropractic bill and expressed the conclusion that vicious legislation could only be fought with a legislative fund. The report of our State Delegate, Dr. W. H. C. Smith, who was unavoidably absent, was read by Dr. Mather Pfeifferberger, of Alton. This report was published in the *Madison County Doctor*. Dr. Berry and Dr. Schroeder made verbal reports of their observations at the meeting of the State Society.

It was announced that Dr. John H. Siegel was a patient in St. Anthony's Hospital and that Dr. J. W. Scott was seriously ill at his home. On motion of Dr. Pfeifferberger, the secretary was instructed to send to each a message of heartfelt sympathy with our very best wishes for a speedy recovery. It was

also ordered that flowers be sent to accompany these messages.

On motion the society endorsed the resolution passed by the house of Delegates at Peoria, advocating an increase in our fees for professional service and the secretary was instructed to publish said resolution, with our endorsement in all the newspapers of our county and in the *Star-Times*, of Staunton, Ill.

The President then delivered the annual address on "Medical Organization." It was a very able and timely paper and was received with marked interest. On motion the address was ordered sent to the ILLINOIS MEDICAL JOURNAL for publication.

Special Meeting at Alton State Hospital.

Friday, June 27, 1919, was a red-letter day in the history of the Madison County Medical Society. On that day we held a special meeting at the Alton State Hospital on invitation of the Superintendent, Dr. Geo. A. Zeller, and it proved to be one of the best meetings we have ever had.

Our Vice-President, Dr. F. O. Johnson, called the meeting to order and delivered the following address:

"We are very much pleased to have such a large audience respond to the invitation of Dr. Zeller, so kindly extended to our society. We especially welcome the ladies because we feel that the ladies of our household have a right to some of the pleasures that are connected with these half holidays. This meeting is arranged as a social occasion and the usual business meeting will be omitted. We meet here in special recognition of those members who have been in the service of the government, either in this country or abroad, and have returned to civil life. We extend to them a hearty welcome and express our pleasure in having them with us once again, and know that out of their vast store of experience, gained during the war our society proceedings will be benefited. We hope that, in the near future, some of these experiences will be given to the society, by the men who have rendered such efficient service to the government.

Thirty of our members volunteered in the service of the government and rendered efficient service in the hospitals and cantonments in this country, and along the battle lines abroad. Twelve of these men went overseas with the American Army. Twenty-five of our members have returned to civil life. Five of our members have not yet been discharged and as far as we are informed, are still abroad."

The chairman then presented the Rev. Jas. R. Sager, of Edwardsville, who in a few well-chosen words introduced the speaker of the day, the Rev. Arthur F. Ewert, of White Hall, Ill.

Lieut. Ewert was the chaplain of the 77th division of the American Army and was right in the thick of the fight. He spoke on the services that the medical profession rendered during the war. He paid a glowing tribute to the efficiency of the medical corps and eulogized their skill in restoring those wounded in battle. He spoke of the long hours devoted to the service and said that the doctors would often work

day and night up to the point of physical exhaustion. His address abounded in humor and pathos and was the result of his own personal observation and experience.

Such wonderful word pictures were never before presented to our members. He carried his audience right up to the front line trenches and made his hearers see the bloody conflict in which the boys were engaged. He took us into the dugouts where first aid was given and where the wounded were placed in ambulances to be taken to the field hospitals.

His hearers were held spellbound by the realistic recitals of the scenes as they followed in rapid succession throughout the presentation. They could feel the soul anguish of the chaplain's bugler, as he sounded "taps" over the dead body of his pal. They were moved to the very depths over the vivid recital of the maiming and wounding of our boys. But the next moment they heartily joined with the speaker in laughter over the letter of a colored soldier who writing to his dusky damsel, said: "When I gets back to you, honey, de whole world will be no man's land to me."

It was a glorious effort and the speaker was complimented by securing the rapt attention of his hearers which he held from start to finish.

Thirty of our members were present and we had the pleasure of greeting thirty-five lady guests, the wives, mothers, sisters, daughters and sweethearts of our members.

ST. CLAIR COUNTY.

The St. Clair County Medical Society met in regular session in the Chamber of Commerce Rooms, Murphy Building, East St. Louis, July 3, 1919, with fourteen members present.

Delegate C. S. Skaggs made a verbal report on the proceedings of the Peoria meeting of the State Society, dwelling with great stress on the meagre attendance from St. Clair County. He considers it a serious reflection on the loyalty of the members to leave the work of the Society to the few who have been bearing the burdens of management for years. He emphasizes the fact that the State Society is more of a "business organization" than a "scientific" body, and referred to the work of preventing the passage of vicious legislation. Only three members of the County Society attended the Peoria meeting.

Dr. Royal Tharp made a very interesting and profitable report on the means adopted by the A. E. F. in the prevention of venereal disease, detailing the methods employed, and giving statistics shown the results. Considerable discussion followed.

Society adjourned.

C. W. LILLIE,
Secretary.

WHITE COUNTY.

The White County Medical Society met at the offices of Dr. J. Niess, Carmi, Illinois, June 26 at 1:30 p. m.

Voted by society that new Fee Bill becomes effective

when signed by majority of members of White County Medical society.

Programs will be arranged for meetings September 25, 1919 and December 18, 1919.

Following program was rendered:

"Report State Medical Meeting, Peoria," Dr. J. Niess, Carmi.

"Tetanus with Report of Cases," Drs. C. W. Puntney and J. A. Boyer, Carmi.

Both of the papers and discussions on tetanus were interesting and valuable inasmuch as they proved beyond the question of doubt that tetanus antitoxin was not only a prophylactic agent but was likewise curative if administered in time and sufficient dosage. Of the seven cases treated and discussed there were five recoveries. In other words the mortality rate was only about 20 to 30 per cent. as compared to the former rate of 70 and 80 per cent.

Adjourned.

DR. J. NIESS,
Secretary.

Personals

Dr. John W. Tope of Oak Park has received a commission as major for services in France.

Capt. Fred J. Eberspacher, M. C., U. S. Army, has resumed practice in Pana.

Dr. Anna Dwyer, Chicago, fell at Ravinia Park, July 11, fracturing her arm.

Dr. William G. Lee has returned from abroad and resumed his practice.

Dr. A. B. Taylor, Canton, has been elected county physician of Fulton county.

Dr. Frank Billings has been discharged from military service and has returned to Chicago.

Capt. Jacob Wilford Wine, Chicago, has resumed practice after service in France.

Dr. S. T. Glasford and family of Pekin are on a motor trip through the New England States.

Dr. Frank Simpson of Chicago reported the loss of \$3,000 worth of radium from his office recently.

The State Department of Registration and Education restored Dr. Haldane Cleminson's license to practice, July 25.

Dr. J. W. Carlisle of Robinson made a rapid recovery from appendicitis recently.

Captain Frank Morrill of Havana, after serving over a year at Camp Shelby and Camp Sherman, has announced that he will locate in Peoria.

Major Charles H. Parkes has resumed practice in Chicago after two years' service in the Medical Reserve Corps in France.

Dr. Carl F. Lewis has returned from military service and located in Jerseyville to resume practice.

Dr. H. Gideon Wells has reached Chicago from Roumania, where he did administrative public health work.

William H. G. Logan, Col., D. C., U. S. Army, has returned after more than two years of military service, and has resumed practice in Chicago.

Dr. Walter W. Armstrong of the Chicago Department of Health, has been made city health officer of La Crosse, Wis.

Dr. George W. Cusick has been appointed local surgeon for the Illinois Central Railroad at Freeport.

Dr. John S. Sweeney, Chicago, has returned after service with the American Expeditionary Forces in France.

Harry D. Orr, Col., M. C., U. S. Army, Chicago, chief surgeon of the Thirty-Third Division, received his discharge at Camp Grand last month.

Dr. Franklin A. Turner has returned from medical and surgical service with the Red Cross in France and Palestine, and resumed practice in Rockford.

Dr. Frank W. Lambden of Chicago was exonerated by a coroner's jury of complicity in the death of a woman who was believed to have died from an illegal operation July 17.

Dr. Frank S. Lower, recently Major, M. C., U. S. Army, announces his return to practice in Chicago, limited to chiropody and surgery of the feet.

Dr. Henry B. Brown, Lincoln, has been appointed local surgeon of the Chicago and Alton Railroad, succeeding Dr. Frank M. Ewing, deceased.

Dr. Mark Greer, Vandalia, has been awarded the Military Cross by the British government for bravery in dressing wounded men under shell fire in France, in September, 1918.

Dr. E. A. Lynwood, Capt., M. C., U. S. Army, returned from France June 25 and resumed his

practice in Chicago, after serving twenty-two and a half months in the army.

Dr. Emmett A. Garrett, Peoria, has been discharged as lieutenant-colonel, M. C., U. S. Army, after nearly a year of service abroad, and has returned home.

Dr. Florence R. Kremer has resigned as assistant physician at the Kenilworth Sanatorium, to accept an appointment with Chesapeake and Ohio Hospital, Clifton Forge, Va.

Dr. Samuel J. Walker, Chicago, who recently returned from service as Major in a special American Red Cross mission, has been awarded a medal of the third class by the Greek government.

Capt. James F. Hilgenberg of Posotum, who received a citation from General Pershing some time ago, is said to have been awarded a Croix de Guerre with silver star by the French government.

Dr. Raymond H. George of Chicago, recently discharged from service as captain in the British Medical Corps, has been awarded the British military cross for bravery in action while evacuating wounded under fire.

Drs. J. W. Dunn, Chas. L. Weber, James S. Johnson and J. T. Walsh are conducting a free clinic for trachoma in school children at St. Mary's Infirmary, Cairo, to forestall the danger of infection in the schools.

Dr. Hartwell C. Howard, Champaign, who was graduated from Starling Medical College, Columbus, in 1850, and has practiced continuously since that time in Champaign, celebrated his ninetieth birthday anniversary, July 12.

The Iowa and Illinois Central District Medical Association elected Dr. W. D. Chapman of Silvis, president; Dr. A. E. Williams of Rock Island, secretary, and Dr. G. A. Wiggins of Milan, censor, at the meeting in Davenport, July 10.

Gustavus M. Blech, Lieut.-Col., M. C., U. S. Army, who went overseas as assistant division surgeon of the Thirty-Third Division, was then in command of a base hospital at Autn, France, and later was commanding officer of a large base hospital in France, returned to Chicago June 29.

Some golf enthusiast may be able to appreciate this item: 'Tis said that Dr. C. Wallace Poorman did it at the Oak Park Country Club. "His patient was the first hole, which is 522 yards from

starting point to terminus. The doctor got two good shots and then holed a mashie approach for an eagle three."

Dr. C. St. Clair Drake, director of the State Department of Public Health, Springfield, was elected secretary-treasurer of the Conference of State Health Authorities at its annual meeting in Atlantic City, and was also made secretary of the executive committee of health authorities of the United States.

Dr. Evarts A. Graham has been appointed professor of surgery in Washington University, St. Louis, succeeding Dr. Fred T. Murphy, resigned. Dr. Graham will be head of the department of surgery and will have charge of the surgical service in Barnes Hospital and Children's Hospital, St. Louis.

News Notes

—The first tuberculosis clinic was held by the Lee County Tuberculosis Association at Dixon, July 9, under the instruction of Dr. Russell E. Adkins, Springfield. In the afternoon Dr. Adkins conducted a similar clinic at Sterling.

—The National Catholic War Council has financed a clinic at Mercy Hospital, Chicago, for discharged soldiers and sailors and their dependents, which opened in June. In August it will have clinics also in the Hospital of St. Mary of Nazareth and at St. Joseph's Hospital.

—Peoria is said to have two extensive hospital additions that involve an investment of a half million dollars. A drive is under way to raise \$300,000 to pay the indebtedness for the new wing of St. Francis Hospital and the foundation is in place for a \$200,000 addition to the Methodist Hospital.

—The Chicago Chapter of the American Red Cross, July 15, entered definitely on the preparatory measures for handling epidemic or other civilian disasters. It has appropriated \$15,000 for the campaign of preparedness, to include courses of instruction for home nursing which will be under the charge of Mrs. John McMahon.

—The Chicago Department of Health offers a free two-months' course of instruction in home nursing to forestall the need of more nurses in case the influenza becomes epidemic again. The first class began August 4, and afternoon and

evening sessions will be held to accommodate different classes. The school is in the former location of Loyola University Medical School at 1258 West Fulton street. Annie McKenzie, R. N., is dean of the school. Over seven hundred women had registered for the instruction before the school opened.

—F. M. Bell, head of Armour & Company's Pharmaceutical department, sailed recently for Europe, where he will study business conditions and get an inside viewpoint of the general pharmaceutical activities in foreign countries. Mr. Bell's visit, which will last approximately two months, will include trips through England, France and Italy.

Armour & Company's line of pharmaceutical goods, which are well known in medical circles, have been under the direction of Mr. Bell for many years.

—The Department of Registration and Education of the State of Illinois, at their meeting held in Chicago July 8, unanimously voted to give full recognition to the Chicago Hospital College of Medicine, 3832 Rhodes avenue. The name of the school is to be changed to Chicago Medical School and the didactic and clinical work will be given largely afternoons and evenings. The board of administration is composed of the following Chicago physicians: Dr. Charles Hill, president; Dr. Rudolph Menn, vice-president; Dr. A. E. Mowry, secretary; Dr. Edwin G. Earle, Dr. Thomas Faith, Dr. E. P. Murdock, Dr. C. A. Simmons, Dr. B. J. Zahn, Dr. H. E. Santee and Dr. Chas. Morrow.

Marriages

EDGAR ROY BRIGHAM, Mosinee, Wis., to Dr. Adelle Ruby Black of Washburn, Ill., recently.

JOHN HANCOCK McCLELLAN, Chicago, to Miss Julia Goodman of Hamilton, Ohio, July 3.

ARTHUR HENRY ORCUTT, Arcola, Ill., to Miss Helen V. Fritman of Brooklyn, July 7.

CHARLES ALLEN GRIFFITH, Oak Park, Ill., to Miss Rhoda Marguerite Phillips of East Chicago, Ind., June 18.

Deaths

ALVIN NELSON KEITH, Chicago; University of Illinois, Chicago, 1883; aged 66; died at his home, June 20, from myocarditis.

WILLIAM H. SCHRADER, Chicago; Hahnemann Medical College, Chicago, 1887; aged 61; died at his home, June 23, from heart disease.

STEPHEN L. WILLIAMS, Spring Garden, Ill.; American Medical College, St. Louis, 1879; aged 80; died at his home, June 4, from cerebral hemorrhage.

VANDALIER N. SWAN, Maywood, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1877; aged 71; died in the Oak Park (Ill.) Hospital, June 24, from septicemia.

DILLARD ESTEP SAMUELL, Wilmington, Ill.; University of Illinois, Chicago, 1908; aged 42; died in St. Mary of Nazareth Hospital, Chicago, June 2, after an operation for appendicitis.

MARTHA MARILL CROFUT, La Grange, Ill., formerly of Denton, Texas; University of Illinois, Chicago, 1907; aged 59; died in the Ravenswood Hospital, Chicago, July 4, from carcinoma.

FREDERICK DAY MARSHALL, Chicago; College of Physicians and Surgeons in the City of New York, 1868; University of Michigan, Ann Arbor, 1868; aged 78; a member of the Illinois State Medical Society; a veteran of the Civil War; died at his home, July 6.

FREDERICK STANTON SONGER, Kinmundy, Ill.; Marion-Sim College of Medicine, St. Louis, 1897; aged 44; a member of the Association of Military Surgeons of the United States; major, M. C., Ill., N. G., assigned Fifth Infantry; died at his home, July 4.

ARCHIBALD I. MACLAY, Delavan, Ill.; Jefferson Medical College, 1874; aged 67; division surgeon of the Illinois Central Railroad; for fifteen years a member of the board of education and for several terms city and township health officer; died at his home, July 1, from heart disease.

WILLIAM WESLEY HOUSER, Lincoln, Ill.; Eclectic Medical Institute, Cincinnati, 1859; aged 81; acting assistant surgeon, U. S. Army, and later major, U. S. V., during the Civil War; for seven terms president of the Illinois State Eclectic Medical Society; was struck and instantly killed by a street car in Lincoln, June 23.

FREDERICK GILLETTE HARRIS, Chicago; University of Illinois, Chicago, 1899; aged 44; died suddenly at his home, July 2, from meningitis. Dr. Harris, who was a native of Chicago, was one of the best known dermatologists of the Northwest. He studied abroad in 1903, 1904, 1907 and 1908, and then became a member of the teaching force of his alma mater, which he served as professor of physical diagnosis, instructor in medicine, and associate professor of dermatology until 1912. He was also professor of dermatology and syphilology in the Illinois Post Graduate Medical School and later in the Northwestern University Medical School, Chicago. The latter position he held up to the time of his death.

Don't stay out in the hot sun too long without shading from the sun with an umbrella.

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SOME PHASES OF WAR SURGERY.*

N. M. PERCY, M. D.

Lt.-Col. M. C., U. S. Army,

CHICAGO.

The surgery of war has changed just as have the instruments of destruction used to produce war wounds. There is a great difference in the character of wounds produced by rifle balls of low velocity, as used in previous wars, and those caused by bullets and other projectiles of high velocity used in recent warfare. A projectile of low velocity causes injury to the structures directly in its course but with very little damage to the tissue surrounding its path. Most of the wounds in the recent war were produced by projectiles of high velocity which not only destroy everything in their path, but cause molecular death of the tissues for a considerable distance around their tracts. It has been estimated that about 75 or 80 per cent of the wounds in the recent war were caused by shell and grenade fragments and shrapnel and 20 to 25 per cent by bullets. Shrapnel balls travel with comparatively low velocity and cause very little damage except to the tissues directly in their tract. Because of this fact, the use of shrapnel was practically abandoned early in the war and replaced by the high explosive shells which proved to be much more effective. The shell fragments, including those from the hand grenades as well as from the high explosive shells, whose edges are sharp and irregular, travel with high velocity, and cut and lacerate the tissues for a considerable distance around their tracts, and frequently nip out pieces of arteries and veins and cause partial sectioning of nerves. The character of wounds caused by the enemy bullets varied greatly ac-

cording to range. They had a velocity of approximately 1,000 yards per second; the first part of the flight is not steady, but wobbling. If the bullet strikes at short range, while still wobbling, and its velocity still high, it is likely to turn end over end as it passes through the tissues, causing marked laceration of the tissues and a dead zone for a considerable distance around the tract. These bullets and shell fragments at short range also have an explosive effect upon the tissues. Bullets that do not strike until after they have assumed a straight flight, and have a lessened velocity, may pass through the body causing very little destruction. All these high velocity projectiles, whether bullets or pieces of shell, when they strike a bone, hitting at close range, destroy the bone by perforating about two-thirds of the distance and blowing out the last third, the fragments of bone thus produced act as projectiles, tearing their way into the surrounding tissues. Therefore, even one small projectile, making only a small wound of entrance, may produce a very extensive, deep, irregular wound, with large or small cavities. These recesses fill with blood and on account of irregular contraction of the torn muscle fibers, may become shut off from the main wound tract and form ideal conditions for the propagation of the various micro-organisms, especially the anaerobic forms.

All wounds produced by missiles are contaminated and the frequency and severity of infection developing in these cases of shell and gunshot wounds is due to two main causes:

1. The presence in the tissues of foreign bodies such as the missile and, above all, pieces of clothing and equipment, which are grossly soiled from the anaerobic bacteria of the earth. The fact that the various missiles so often carried pieces of clothing into a wound undoubtedly accounts for the frequency and severity of septic complications in the non-treated gunshot wounds.

*Read at the 69th Annual Meeting of the Illinois State Medical Society, at Peoria, May 21, 1919.

The condition of the battlefields of France undoubtedly had much to do with the quality of the infective agents. Many of the battles were fought over lands which had been farmed for hundreds of years, and which had been liberally manured in an effort to produce intensive farming. In the trenches the soldier is brought in most intimate and prolonged contact with the soil, as a result of which his body as well as his clothes are teeming with bacteria. Every projectile passing through the clothing is sure to become contaminated with mud or dust.

2. The crushing, tearing and devitalization of the tissues, especially the muscles, with rupture of their blood vessels, prepares a good culture medium for the contaminating bacteria carried into the wound by the missile.

War surgery has a two-fold duty, first and foremost, to prevent development of infection instead of treating infections; second, to repair carefully and restore as completely as possible the disorders caused by the wound and by the operation.

The majority of battle casualties had multiple wounds. In fact, it was quite rare for a patient who had been injured by a high explosive shell or hand grenade not to have multiple wounds. For instance, in one of the reader's patients the roentgenologist localized 22 foreign bodies, there being many other minute shell fragments imbedded in the body too small to be localized. These 22 foreign bodies were removed through nineteen separate incisions.

Surgery at the front might be called surgery of bacteria. All wounds are more or less contaminated with bacteria and the principle aim in the vast majority of cases is to render the wounds surgically clean, thus preventing the development of infection.

While a large variety of micro-organisms may and do gain entrance to war wounds, only a relatively small number find suitable conditions for development within the living tissue.

Of the aerobic forms the following may be mentioned as most commonly found. Streptococcus, usually the hemolytic type, staphylococcus, enterococcus, bacillus pyocyaneus, bacillus of Friedlander, bacillus coli communis. Of these, by far the most important is the streptococcus, in fact, without the presence of streptococci

either alone or associated with other micro-organisms, practically no serious infections developed. A great many different species and varieties of anaerobes were isolated from war wounds but the bacillus aerogenes capsulatus of Welch is the only one that seemed to be of much importance and was present in the majority of wounds. I cannot give the frequency in which it was present in our work but it has been estimated that it is encountered either alone or associated with other anaerobic forms in about 75 per cent of war wounds.

The three anaerobes next in frequency were the Bacillus edematiens, Bacillus sporogenes and Bacillus fallax. The importance of the Bacillus edematiens lies in the fact of the seriousness of the cases in which it occurs. Streptococci were present in many of the cases of gas gangrene and when present seriously affected the prognosis.

During the early period of the war, gas bacillus infections played an important part. The recent advance in surgery together with the improvement in the transportation facilities, permitting of early surgical treatment of wounds, greatly reduced the occurrence of gas gangrene. The elapsed time between injury and time of treatment is a great element in the development of gas gangrene. If these cases are subjected to surgical treatment before a gas infection has actually developed, it is extremely rare to have gas gangrene follow.

We must look upon all war wounds as being contaminated with bacteria, but a certain time must elapse before these micro-organisms can multiply and develop injurious agents in sufficient amount to produce definite evidence of infection. No limit can be fixed as to the length of time it takes for infection to develop after injury, as the time required for an infection to become fully established depends upon a variety of factors and varies more or less with each individual case. For practical purposes wounds may be placed in two groups: Fresh wounds which although contaminated are not yet the seat of an infection, and the older wounds in which an infection has already been established. Wounds as a rule which come under observation within six to ten hours belong to group one, while those coming under observation at a later period frequently are found to be the seat of an

infection. In some instances, wounds not over six hours old had developed a virulent infection; on the other hand no definite evidence of infection was present in many wounds fifteen to twenty hours after injury. The microscopical examination of fresh wounds reveal very little information of importance. A smear from such wounds will show a mixture of blood and serum with probably bits of muscle or foreign material and few if any bacteria. A culture made from the same wound will show a variety of microorganisms. Thus in the primary treatment of wounds one has to depend upon the clinical findings rather than the laboratory to guide him in the treatment, especially as to primary closures.

Wounds of the soft parts are the most numerous and can be taken as a basis in the consideration of war surgery.

The principal aim in the treatment of war wounds is to prevent or at least hinder the development of the infectious process in the wound. Experience has demonstrated that in wounds which came under observation before the infection has become established, it is possible in the great majority of cases to render them surgically clean and thus prevent infection. This is accomplished by doing a debridement of the wound which consists in:

1. Dissecting anatomically the tract of the missile.
2. Removing the devitalized and torn part of the tissues.
3. Removing the missile and any pieces of clothing.
4. Securing a careful hemostasis.

The closure of the wound may be: First, by immediate or primary suture; second, by delayed primary suture, or third, by secondary suture.

CLINICAL EXAMINATION OF THE WOUNDED.

It is important that a careful clinical examination of the wounded be made before operation, as much information can be obtained which will be of value in carrying out the treatment, especially as to the primary closure of the wound.

In the majority of cases, one can determine before operation which wounds can be sutured primarily.

1. If a patient's general condition is not satisfactory, his wounds must not be primarily sutured.

2. The pulse should always be carefully considered. As a rule any patient whose pulse is above 120 should not have a primary closure of his wounds.

3. A great deal of importance has been placed upon the time elapsing between the injury and the operation. Some have gone so far as to prohibit primary suture for wounds that have existed more than 8 to 10 hours. The reader found that the majority of wounds of the soft parts could be closed after an elapsed time of 12 to 15 hours and some even 24 hours after the injury. However, it is an established fact that time is a factor of great importance in making a decision and the percentage of cases suitable for suture decreases as the time elapses after injury.

4. Local examinations may give much information. The majority of gas wounds should be recognized before operation. Most cases can be detected by smell. The region about the wound is always swollen and often slightly tympanic. This can be elicited by nail percussion (filiping) which examination should be made systematically in the region surrounding the wound. Tenderness is always present. This finger percussion often causes severe pain at the point of greatest tympanitis. It was noted that the pulse was invariably increased in all cases of gas infection. The presence or strong suspicion of gas being present is a contraindication to suturing the wound.

5. Where wounds are in a location allowing a possible nerve injury, a clinical examination to determine motor or sensory paralysis must be made. All nerve injuries thus determined must be sought for during operation and repaired if possible.

6. Vascular lesions, which are often overlooked, should be sought after, for when present they may influence the technique of the operation, and also be the determining factor of closing the wound. This is of great importance in wounds of the lower extremities. It was quite common to find an injury of the posterior tibial artery. If this accompanied a fracture of the tibia, as was frequently found, gas gangrene followed in a high percentage of cases.

7. Clinical examination revealed much information concerning muscular and bone injuries. There were many large wounds with

destruction of muscle, also bone injuries, in which simple inspection made it evident that primary suture should not be performed. If there was an injury to the femoral, popliteal, or both anterior and posterior tibial arteries, complicated with a comminuted fracture, gas gangrene almost invariably developed. The clinician soon learns to determine all these conditions quickly, making it possible to plan the operation most advantageous to the individual case.

8. It should be borne in mind that wounds in the calf, thigh and buttocks are more liable to develop gas gangrene than wounds in other regions.

Incision: In planning the incision it is important to consider the questions of ultimate closure and restoration of function of the part. In wounds of the extremities the incision should be made parallel to the long axis of the limb, a transverse incision being avoided whenever possible. The latter is much more difficult to close, either primarily or secondary, furthermore, the functional result is less favorable on account of the muscle and fascia being cut transversely. The incision should be a comparatively long one, as it is a disadvantage to attempt the dissection through a short incision. It should surround the skin. This usually means a strip one c.m. in width. The subcutaneous tissue is removed as far as there is evidence of laceration or contamination. This brings into view the opening in the deep fascia which is usually much smaller than the skin wound. The fascia is split a considerable distance removing the edges of the fascial opening. This brings into view the wound in the muscle, and one is often surprised to see the amount of muscle destruction in comparison to the small amount of damage present to the skin and fascia. By means of a pair of sharp curved scissors, the dissection is carried down through the first plain of muscles, removing all devitalized muscle fibers which do not bleed, or which have lost their normal power of contraction when they are pinched with forceps. It is usually found necessary to excise one c.m. of muscle on all sides of the tract. When finished all muscle tissue must have a healthy appearance and bleed when cut and contract when pinched, otherwise its vitality is lessened to such a degree as to favor gas gangrene.

During the operation the tract should be kept in view, the dissection of the muscle being made in the direction of its fibres when possible, being careful to avoid injury to nerves and blood vessels. Care should be used in sponging so as not to contaminate the operative wound from the tract. It is easy to follow the tract through the first muscle plane, but at this point it is frequently lost. This may be due to the fact that a shifting of the relation of the two muscles has caused a broken line in the tract. In such a case, if one retracts a little above and below the first muscle, and has the assistant move the limb slightly, it will often cause the lost tract to re-appear. Following the tract in the muscle is usually easy, but not always so. If the tract in the muscle is lost, one should avoid using the grooved director as it merely creates artefacts. By careful inspection of the wound at the point where the tract was last seen, one has the greatest chance of picking it up again. It will appear as a little bloodclot or fragment of clothing, or merely as an ecchymotic spot on the muscle. It will be seen by very gently lifting or drawing a little sideways a few muscle fibers and one again finds the way which will lead to the foreign body.

When there is a through and through wound in the thigh, one should follow the tract from one end to about the middle of the thigh and place a gauze pack at this point. A dissection is started at the other extremity of the tract, and carried down to join the first one. Thus the wound is debrided by making a double cone dissection. Where a projectile has gone almost through a thigh, and lodged a few c.m. from the skin on the opposite side, the tract is followed from its entrance to the middle of the thigh, then on the opposite side go direct down to the missile and then dissect the tract back until the initial wound is reached. Careful hemostasis should be carried out in all cases. After the wound tract has been followed carefully, excising the cutaneous wound and all of the devitalized muscle together with all foreign material, an inventory should be made of any injury to important nerves or blood vessels. Any severed nerve should always be sutured immediately. Where there is only partial section of the nerve, it is well to reinforce the nerve by stitching together the neurilemma. If the tract

is in close proximity to large blood vessels, these should be carefully inspected to determine any injury to the vessel wall.

If the wall of a blood vessel has been injured, the ligation of which would not be liable to cause gangrene, the vessels should be ligated double and the injured portion excised so as to avoid the likelihood of a secondary hemorrhage or the development of an aneurysm.

Closure of the Wound: If none of the contra-indications as given above are present, the wound should be sutured primarily. It has the decided advantage of shortening the convalescence and lessening the patient's discomfort by having no open wound to be dressed. If the debridement operation has been well done, the wound should heal just as kindly and quickly as a clean abdominal incision. As our experience increased, we found we could close a larger percentage of wounds with safety.

Whenever there is any doubt as to the safety of an immediate closure, it is well to leave the wound open and later make a delayed primary suture, or a secondary suture.

By a delayed primary suture is meant the closing of a wound after a variable number of days, without further excision or freshening of any kind before suturing. Practically this means wounds sutured within nine days after primary operation. Secondary suture consists in closing wounds in which it is necessary to excise scar or granulation, or, at least, to freshen and loosen the skin margin before suturing. The interval following primary operation may vary from ten days to several months.

All wounds in which primary closure is not done, should be packed lightly with gauze saturated with Dakin's solution or some other chemical antiseptic or Dakin tubes may be placed at once.

I will not attempt to compare the value of the Carrel-Dakin treatment with any of the other chemical methods of the treatment of war wounds. In fact, I had no experience with any of the other methods as it was the policy at the Evacuation Hospital No. 1 to treat all open wounds by the Carrel-Dakin method. There is no doubt in my mind that the Dakin solution, if properly used, is of great value in the treatment of war wounds. By dakinizing a large number of infected wounds, it was found that

the length of time required to sterilize the wound sufficiently to permit of a secondary closure was twelve days.

When closure of a wound is deferred, the work of the bacteriologist becomes of the greatest importance because in these cases the laboratory findings must determine the treatment to be adopted.

In cases in which a delayed primary closure is contemplated the wound is dressed and a smear and culture of the wound is made.

If a report based upon the smear does not show any bacteria and the patient's general condition is good, the wound can be sutured immediately. If the smear shows bacteria, one should wait for a report based upon the culture. If the culture reveals the presence of anaerobic micro-organisms or streptococci, suture should not be made. A few staphylococci present are not necessarily a contra-indication to closing. All wounds in which the laboratory revealed infection were subjected to the Carrel-Dakin treatment at once. The first laboratory report based upon the culture determines the type of infection and the report from the smear gives the numerical evolution of the bacteria per microscopic field. A smear is made from the wound every second day and when the bacteria disappear or the count drops to 1 to 5 or 10 fields, the wound is suitable for closure except when the wound has contained streptococci. In such instances, it is well to obtain two negative cultures before closing the wound. In making these cultivations, it is important to gather material from many points in the wound, since it has been found that streptococci may be absent in the greater portion of a wound and yet present in certain restricted areas. With the presence of most other bacteria, including the Welch bacillus, to the extent of 1 to 10 or 15 fields, other conditions being favorable, the wound may usually be closed with safety.

Secondary closures, if the wounds are properly prepared, should be successful in at least 95 per cent of cases. These wounds heal quickly and avoid the troublesome formation of scars and contractures and often shorten the convalescence by several months.

DISCUSSION.

DR. BARRETT (Chicago): I just wish in a few words to commend Dr. Percy's paper from the standpoint of general experience gained in the war work. The

point that he made as regards the length of time that had existed after the injury was very important. A wound could usually be counted contaminated but not infected within the first five, six to eight hours. It was usually infected with certain kinds of foreign bodies, not so apt to be grossly infected, with "through and through" rifle balls, if they kept a straight course. As he said, in the beginning of the shot, it is something like spinning a top. In the beginning of a shot, there is some wobbling, then from the spiral turning it straightens and then at the end of the shot it begins to wobble again. We had no way of knowing how far the person was away from the gun when he received the wound, but we could tell something by the injury. If it were going straight, it entered through a small opening, came out through a small opening, and because of the pointed and non-jagged condition, could be counted not to take foreign material in the way of clothing into the wound, and so such a wound could oftentimes be left alone. Such wounds were sometimes left without surgery even in the upper abdomen, where the shot was passed through the liver, with good results. Such wounds could be left open for the time being, through the chest, and through the arms and legs and feet and so on. The shrapnel was a thing of which we saw very little, as Dr. Percy said.

What was more common than any of the others was fragments, and those made the terrible wounds, multiple wounds, wounds that took foreign bodies into them. A great many cases came into the evacuation hospital—say, six hundred—back of the battle of Champagne. Since the evacuation hospital was not really ready to do the work, the worst cases were picked first. That is contrary to general opinion. It is sometimes thought that the cases that can get back to the field of war soonest are picked first for treatment. That is not so. The worst cases are picked for surgery first. It was oftentimes found that the latter part of those six hundred cases was in worse condition when we got to them than the worst cases were in the beginning; that is, infection had gone on to such an extent that they were worse cases to deal with, more amputations perhaps than the very badly injured cases were in the first few hours.

THE ILLINOIS SCHOOL FOR THE BLIND*

A. L. ADAMS, M. D.,

JACKSONVILLE, ILL.

Previous to the year 1830 no special attention had been given to education of the blind in the United States. About this time certain progressive men in the eastern states became interested in the problem and for the first time, the deaf

and dumb, and the blind, were included in the National census.

In 1832, The New England Asylum for the Blind, in Boston, and the New York Institution for the Blind in New York City were opened. In 1833 the Pennsylvania Institution for the education of the Blind first admitted pupils. These are known as the pioneer schools.

The Illinois School for the Blind owes its origin largely to the interest and labor of a totally blind man, who was born blind, Mr. Samuel Bacon. He came to Jacksonville, in 1847 shortly after his graduation from the Ohio School for the Blind at Columbus, encouraged by leading citizens to attempt the establishment of a school for the blind.

Shortly after this he visited Springfield, where the constitutional convention was in session and where he had an opportunity of meeting many of the prominent men of the state.

He kept the interest of the blind children on his mind and kept up a vigorous correspondence with their friends.

In the following spring in April, 1848, he returned to Jacksonville and met those who had given him encouragement. It was then an organization was created whose object was to gather information to show the necessity of such a school for the education of the blind. Also to open as soon as possible a private school in Jacksonville where the value of such instruction could be demonstrated to all.

To defray the expenses of this undertaking subscriptions were solicited from the citizens of the town. The returns were sufficient to guarantee the support of the enterprise.

Mr. Bacon was authorized to continue his work of securing information concerning the blind in the state and interesting their friends.

This he did and after many months of active labor and correspondence, during which he visited many countries, traveling on foot, by stage, on horseback, and by boat, and by wagon covering over two thousand miles, he secured the names of nearly sixty blind children, many of whom he visited.

On June fifth, 1848, a private school was opened with four pupils; Mr. Bacon was retained as instructor. The school was in session seven months.

Of the work done Mr. Bacon says "The pupils

*Read before the Eye, Ear, Nose and Throat Section of the Illinois State Medical Society at Peoria, May 22, 1919.

were taught to sing twenty quartettes; the geography was elementary as we had no maps. In arithmetic they were taught all forms of fractions, also cube root, and they were able to solve any arithmetical question.

Early in January, 1849, these four pupils were taken to Springfield and on the ninth were exhibited before the members of the Legislature in order "to satisfy them that the blind could be and ought to be educated."

Considering the interest taken by the citizens of Morgan County in showing the necessity of such a law it need cause no surprise that the first of the school trustees were Morgan County men and that its location was in Jacksonville.

Mr. Bacon served as the first "principal" of the school at a salary of six hundred dollars per year.

It will probably be of interest to know that Mr. Bacon was instrumental in later years in establishing two other schools for the blind, one at Vinton, Iowa, another at Nebraska City, Nebr.

Mr. Bacon was succeeded by Dr. Joshua Rhoads whose influence was far reaching in establishing good standards for the school during his twenty-four years of service.

There are in the United States nearly one hundred thousand persons who are blind. Of these, five thousand are children of school age who are being educated in the different state schools throughout the country. These children are received at the age of six years and are given every educational advantage possible in the various schools. Nearly every state in the Union has built and maintained a school for this afflicted class of children.

The curricula of study extend from the Kindergarten school through a thorough four year high school course,¹ and the graduates from these various schools are received in the colleges and universities of our country.

The system which is uniform throughout these state schools is called the American Braille Method; it is a system of embossed dots a group of which may be a letter, a word, a numeral, or a musical note. By this system of stereotyped or embossed dots which is read by the finger tips it is possible to express any thought in literature, mathematics or music. Notwithstanding the fact that reading with the finger tips is one of the most difficult problems in all the field of education, its

accomplishment is not beyond the ability of the average blind student. This system of American Braille is the means by which Helen Kellar, though deaf, dumb and blind, was graduated with high honors from Vassar College. This is considered one of the greatest accomplishments in all the history of education; there are many of our blind students who have met all requirements of our great universities and have been graduated with high honors.

Perhaps a word of explanation about the Braille system would be of interest. In all blind kindergarten schools the children must learn to write on a Braille tablet. They do not proceed as we do in writing script, but they write as we would say, backward, from right to left, and each letter must be made just the converse to what it really is when read. After a page of Braille is thus written the sheet of paper is turned, and the pupil proceeds to read from left to right. The simple method which is described above, is what is termed straight Braille, that is, each word spelled out in full embossed dots.

When a blind child enters the fourth grade, in order that he may read more rapidly and fluently he learns a short hand system of Braille; in this system, certain dots or groups of dots represent sounds or words. By this last named method of contracted Braille a blind child can read nearly as rapidly and as accurately as can children with sight of the same age. From the fourth grade on through the High School blind children are taught the use of the American Hall Braille writer which is a stereotyping machine resembling the typewriter, but which makes embossed dots instead of printed characters. In passing, let us remember that all educational work for the blind must be through raised forms, relief maps, embossed characters and equipment peculiar to the instruction of the blind, as they must depend solely on the sense perception of their finger tips. This sense perception becomes so keen as pupils continue their training that the slightest raised impressions and these covered with several thicknesses of silk handkerchiefs can be read distinctly. In many cases the mental acumen of the blind, through long years of concentration, is as keen as is their sense of perception.

The institutions for the blind children of the various states are not custodial, but are educational in every instance and every sense of the

word; it is quite impossible for them to be educated in the public schools except where special equipment, and specialized instructors are provided, and so by special taxation are the state schools for the blind maintained. Into these schools are the blind children assembled in September of each year where they are instructed by teachers who have specialized in this particular technical line of education. These children live in the school for nine months of each year, (returning home on June 1 for three months vacation) until they have been graduated from the high school or have dropped out for various reasons.

No pupils are taken for special studies. The methods and course of instruction are as nearly as possible the same as in seeing schools, the main difference being the greater amount of time required to get results and necessarily covering less ground in each study.

One handicap is an insufficient supply of modern books because of the cost of production; an ordinary school book worth one dollar and a half when produced in the type used by the blind costs twenty-one dollars.

The Illinois School for the Blind has grown from year to year until today it compares favorably with the best of its kind in the United States. It has ten splendid brick buildings amply equipped, valued at nearly one half million dollars, and an enrollment of two hundred and twenty-five blind boys and girls who come from every part of the State. The state pays for board, room, laundry, tuition, books and medical attention. The only expense incurred to parents or guardians of blind children is that for clothing, and transportation to and from the school. The total cost of educating a blind child who enters the kindergarten and passes through all the eight grades and four year high school course is about five thousand dollars.

In addition to the academic or cultural course, which is the constant of all education, music and the various industrial lines are pursued as supplements. For example, the pupils' abilities are thoroughly tested, and by the time they reach the upper grades it is definitely known what line of work they should follow as a supplement to the literary course, and by which they may be able to earn a livelihood after leaving the school. The

social worker or field agents connected with the school whose duty it is to find employment for the efficient graduates, find a market for the handmade products of the blind and to enforce the compulsory school law for the blind, have a splendid correlation with the industrial teachers, all of which has resulted in financial aid for the blind of Illinois. The supplementary courses which, of course, are always secondary in importance, from the educational standpoint, teach the principles of thrift, industry and independence.

There is no one large field of industrial employment for the three thousand seven hundred blind people of Illinois. The pursuits which years of experience have proved to be the best for them are chair caning, carpet, rug and fabric weaving, broommaking, reed and raffia basket weaving, piano tuning, typewriting and telephone operating.

Chair caning, fabric weaving and basket making are more profitable to students who live in large cities, as they require practically no equipment, the work can be done at home, and the orders can be gotten from their immediate communities. These classes of workers can earn from twelve to eighteen dollars a week. The length of time required to learn these trades depends upon ability, age and adaptability, but the average high school student can learn them in two years carrying them in addition to their literary course. Special stress is placed upon carpet and fabric weaving. This industry is taught to boys and girls alike, and they do equally well. Many kinds of cotton, linen and silk fabrics are manufactured and placed upon the markets. Handmade rugs and carpets are made by the blind and are on sale in many of the department stores of the large cities and find a reasonably ready market.

The industry of basketry is conducted as extensively as is that of weaving. The articles made are useful and practicable; this trade fits pupils for workshops where contracts are made for large orders and employment is provided continuously.

The blind piano tuner after graduating from a course of instruction either takes up private tuning or finds employment in a piano factory. At this profession the blind tuner can earn from fifteen to twenty-five dollars a week. The school

maintains a class of about twenty or twenty-five piano tuners each year.

Typewriting and dictaphone operating are two of the most useful and helpful occupations for the blind girls. Seven of our graduates have just been placed in fine positions where they earn from fifteen to eighteen dollars a week.

A large number of our graduates have pursued courses in law, osteopathy massage, and a few in medicine. These men and women have shown by their successful professional lives "not under the difficulties but over them." Their success has required a steadfastness of purpose, patience, time, and the expenditure of much time and energy.

In order that the blind may keep themselves informed in the progress of history and current events magazines are printed in Braille, great state and national libraries are maintained and Braille books are sent free of charge through the mails to the blind who can read.

The leading organization of the blind in this country is known as The American Association of the Workers of the Blind, and is composed of one hundred subordinate societies, from thirty-one states.

The physical condition of many of the pupils, especially those from the larger cities of the state, is much below normal. This may be attributed to their former environment or the disease which made them blind.

Every effort is made to improve their physical condition by suitable work in the gymnasium and an abundance of fresh air both day and night is provided. The dormitories never having more than six pupils. The school is divided into seven families, a supervisor being in charge of each family. The supervisor is responsible for his pupils during the time school is not in session. The teachers, of course, have charge during school hours.

It is the purpose of the school to have in attendance all children of school age in the State of Illinois whose sight is so defective as to bar them from getting an education in the public schools.

A record of all pupils on entrance has been kept to determine the amount of vision, if any, the cause of blindness, and the necessity for treatment or prophylaxis in case of contagious eye disease.

Table 1. THE DEGREE OF BLINDNESS

	Per Ct.
Totally Blind.....	27
Light perception only.....	33
Nearly Blind.....	18
Useful Vision.....	20

By useful vision it is not to be thought that there are seeing pupils in the school. By it is meant those having vision enough by using it to get about with comfort, yet have not sufficient sight to get an education with ordinary print.

Some of this class although able to see ordinary type at close range, should not use the eyes because of some diseased condition of them making such use hazardous, as in high degree of myopia and choroiditis.

The nearly blind are those having vision sufficient to see large objects or may be able to count fingers at one foot, but not able to get about with ease depending upon sight alone.

No adequate definition of blindness is available. Each applicant is examined with regard to the condition of the eyes and amount of vision and a decision is reached as to whether or not he should be admitted as a pupil.

All applicants should have been examined by one skilled in examining and treating eye diseases before coming to the school, but unfortunately often this is not done. It is not unusual to have children appear for admission who may have strabismus, with vision normal or nearly normal in one eye, or with uncorrected marked error of refraction.

I cannot refrain from calling your attention in passing to some among your patients who are on the border line.

They can see sufficiently to make certain use of ordinary printed books. They cannot see the blackboard from the front seats in school, and any continued use of the text-book is injurious to their weak eyes. These children should have the advantage of special rooms with the best of lighting facilities, special teachers, and special methods in teaching.

An experiment in education is being tried out in several places, in what is called sight saving classes. A notable instance is in Cleveland, Ohio.²

1. Data referring to the technical education of the blind was furnished by Mr. R. W. Woolston, executive officer of the Illinois School for the Blind.

2. R. B. Irvin, Outlook for the Blind, July, 1917.

These classes are for those with defective vision who are on the border line. The effort is made to enable them to be educated and be considered as seeing and not blind pupils. The effort is made to:

1. Minimize the eye strain during the school life of the child.

2. To teach each child how to conserve his own limited vision.

3. To give such vocational guidance and if necessary vocational training as will enable him to fill a useful place in the community where his visual defect will act the least as a handicap. This requires a special room, special classes and methods and supervision of an eye specialist to conserve the precious vision remaining.

What is the aim of those who are engaged in educating the Blind?

Professor Burritt of the Pennsylvania School for the Blind in his annual report³ says: "The aim of education is to prepare for complete living. To live completely means to be as useful as possible and to be happy. By usefulness is meant service, i. e., any activity which promotes the material or the spiritual interests of mankind, one or both. To be happy one must enjoy both his work and leisure." * * *

This statement of the aim of education implies not only the opportunities for leisure but for work; no normal person can be useful and happy unless occupied.⁴

So the effort is not only to give them a general education but to train them as far as possible in some work that will make them wholly or in part self supporting.

DISCUSSION.

DR. WALTER J. FRANK (Jacksonville): *Mr. Chairman and Members of the Section:* We have heard of course, a very interesting discussion on the School for the Blind. I am here more for the purpose of telling you something about the School for the Deaf at the request of Dr. Peck. However, Doctor, I am not the physician for the Institution for the Deaf. There has been no appointment made for two years.

The School for the Deaf, located at Jacksonville, is caring this year for 345 children varying in age from six or seven up to eighteen or twenty. Their capacity has always been somewhere around 350 to

400 children. These children are brought in there preferably at the age of seven, because they feel that at that age they can do more with them than at a younger age unless they come from a very intelligent family, that is, a family intelligent enough to have given these children some training. The majority of them have received none. They have just been kicked around from pillar to post and have been considered no more than animals. Most of them, unfortunately, come from people in the poorer classes, people of the more ignorant classes, and, of course they receive less training of any kind than they would if they were of more intelligent classes.

Your Chairman has asked me to say something about how these children are brought there. I have here an examination blank secured from the managing officer of the School for the deaf. Application is simply made direct to the managing officer. This blank is sent back to be filled out in writing. They want to know the child's name and what the child is called at home; when born and where born; whether the child was born deaf. If not, at what age was the hearing lost and through what cause? And it continues with these questions:

Is the child totally deaf? If not, what noises can it hear?

To what extent, if any, can it distinguish the human voice? Have efforts been made to cure the deafness? If so, when, by whom, and with what results?

Can the child understand what is said from watching the motion of the lips of a person speaking? Can the child utter intelligible words? Give example. Does the child communicate intelligently with those with whom it has constant intercourse? If so, how?

What has been the state of the child's health in general? What is the condition of the child's eyesight? Is the child physically sound and free from fits, from scrofulous ulcerations, chorea or St. Vitus dance, and from symptoms of acute, chronic or cutaneous diseases?

Is the child white or colored? Height? Weight? Any peculiar appearance? Scars? Lameness? Has the child had Scarlet Fever? Measles? Mumps? Whooping Cough? Smallpox? Been vaccinated?

Does the child dress and undress itself? Does the child use knife and fork at meals? Has the child been trained to cleanly habits? Can the child walk up and down stairs alone? Does the child engage in friendly play with other children? Has the child ever attended any school or been under instruction? If so, where and how long? Can the child read and write intelligibly? Has the child learned to perform any manual labor, or ever been usefully employed? If so, at what?

Does the child live with its parents? If not, state with whom it lives. Where and how is it maintained? Who will be responsible for it during the summer vacation or when sent home? Is the father living? If so, what is his occupation? Father's full name? Where was father of child born? What is his de-

3. The Aim and Education of the Blind, O. H. Burritt, Outlook for the Blind, October, 1913.

4. Educational Aims and Educational Values, p. 5, Paul H. Hanus, Assistant Professor History and Art of Teaching, Harvard University.
323 W. State street.

scent? Give name of father's parents before marriage. Is the mother living? If so, what is her occupation? Where was mother born? What is her descent? Give full name of mother before marriage.

Are the father and mother deaf to any degree? If so, since when and from what cause? Were the father and mother cousins or related in any degree before marriage? About what is the parents' average income? Do they own a home?

Then the blank continues with an outline for the full family history, et cetera.

DR. GEORGE SUKER (Chicago): It may be of interest to you at this particular point to know, if you do not already know it, that this war caused the total blindness, the loss of two eyes, of just 125 men, no more and no less, thank God no more. There are about 2,200 men who have lost one eye outright or one by traumatic cataract—having one good or normal eye left. I have in mind one man in particular, a pharmacist, who lost both eyes, and both hands were amputated at the wrist; and, strange to say, he is being taught the Braille system and is reading with the wrist stumps. Think of it! To read with the stumps of his wrists! A thing never heard of or thought of before. It goes to show that the nervous mechanism and the sensitive mechanism of man is exceedingly intense, and through the beneficial action and the conservation of energy through the wise forethought of nature, she will develop the deficiency that exists and hyperdevelop the sensitive organs of those parts which are deficient. Undoubtedly this young man will be able to read as fluently by the Braille system as we can by the use of our own eyes.

I am very glad to say that there are only 125 men totally blind. There are only two men in the service who have lost both eyes and both hands. There was only one man who has lost both eyes, both hands and one leg.

DR. J. S. CLARK (Freeport): I think we are fortunate to have Dr. Adams with us this year and the other Doctor who discussed the paper to tell us that we, as citizens of the state, have in the way of advantages in these Schools for the Blind and the Deaf at Jacksonville.

There has been quite a bit in the literature of late in the way of propaganda, you might say, in regard to conservation of vision, but there has been not enough, I believe, spoken and written regarding the conservation of hearing.

On the subject of mastoiditis, this delay that we go through in waiting to see whether we shall or shall not operate, whether we shall do a paracentesis or not, causes the end result of great loss in hearing, and I believe that we should do more in this matter of the conservation of hearing in youth.

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DR. ADAMS (Closing discussion): I was unable to reach a good many of the points that I wanted to make in the paper. One of the first things that

I will say in regard to the reasons why I brought the paper before you is this: That if the profession, if the Doctors who see the blind child can assure the parents that the child will be happy in school, will be well taken care of, it will go a long way toward getting the child in early. The earlier the child is in the school, the better progress it makes.

DR. BROWN: Is there any state law requiring that the child should be sent to the Institution?

DR. ADAMS: There is a law that requires the blind children to be sent at six years of age. Sometimes they take them a little earlier. It depends upon circumstances. The children are happy and they thrive; they do well physically, mentally and in every way.

In regard to the question of examinations, I would like to say that I feel that every child that is sent to the school for the blind should be examined by an oculist, a competent person. They often come there with strabismus expecting to be educated in music, and with all sorts of diseases, and there are a good many who don't reach there until several years after they should because they had no knowledge of there being a school in the state.

In regard to the aptitude for learning, I would say that the children who have the most vision learn the Braille slowest. When the amount of vision is considerable, the temptation is so great to read the Braille with the eyes that they will not use their fingers.

INFECTIONS OF THE GALL DUCTS AND THEIR TREATMENT*

P. FRANKLIN JAMES, M. D.,

PEORIA, ILL.

In the diagnosis of infections of the gall duct, probably the first symptom that calls our attention to this trouble is a chronic indigestion, or the so-called stomach trouble extending usually over a considerable period of time. The patient will experience more or less difficulty or distress after eating; he will be troubled with gas, bloating and belching, be more or less constipated, and have a dull headache. These symptoms along with a lack of ambition, no decided loss of weight, and at times a great desire to sleep after eating, should warrant a full and complete examination of the liver and gall bladder regions. In the diagnosis of infections of the gall ducts, Murphy's hooked finger percussion of the gall bladder is a most useful aid. Another important aid, and let me say that I don't believe physicians attach sufficient importance to this point, is the history

*Read by title at the annual meeting of the Illinois State Medical Society at Peoria, May 21, 1919.

of the case, or the patient's own story of his present trouble. Let the patient tell in his own words the story of his present trouble, take note of the important points and then check up these points and see whether or not the physical findings fit the history of the case. Don't try to lead the patient by asking what our legal friends term "leading questions"; in other words, approach each case with an open verdict, and listen and weigh the evidence in every case.

The early symptomatology of chronic cholecystitis is characterized by a long continued indigestion and flatulency, belching, sometimes vomiting and more or less intestinal indigestion. This stage is followed by a second stage, which may be characterized by the movement of calculi or colicky pains. It is during this stage that the colic is often brought on by indiscretions in diet. The attacks frequently occur at night and last but a few hours, but may last for several days. The ages of this second stage vary from 30 to 50 years of age. The final stage of cholecystitis is characterized by intense pain, often jaundice, and dangerous complications, such as empyema and gangrene of the gall bladder, obstruction of the common duct, acute pancreatitis, carcinoma, and intestinal obstruction from stones. These complications usually occur after 45 years of age, but, of course, may occur much earlier. The pain is usually referred to the right hypochondrium. Vomiting after meals and jaundice are present in about 41 per cent of the cases.

In the diagnosis of gall stone disease, or cholecystitis, the x-ray should be considered only a support to the clinical history, as in the great majority of cases the diagnosis of gall stones cannot be made by the x-ray alone, and the majority of diagnoses of cholecystitis can and should be made before the occurrence of gall stones. It is estimated that when gall stones are present, the x-ray will reveal them in about 50 per cent of the cases.

In the differential diagnosis of cholecystitis those diseases which must be excluded are appendicitis, stone in the kidney, recurrent chills and fever of ague and in the beginning stages of gall bladder disease and tuberculosis. Cholecystitis can be differentiated from tuberculosis by first, the history of the case; second, the lack of the tubercle bacillus in the sputum, and third, the absence of any great reduction of weight. In

malaria the differential diagnosis will be made by the leukocyte count; the septic cholangitis always produces a leukocytosis. In appendicitis the tenderness is located over McBurney's point. In the case of the kidney stone, the pain and tenderness are located over the affected kidney, radiating downward along the course of the ureter. The soreness following an attack of colic, due to the movement of a stone in the kidney or ureter rapidly disappears after the cessation of pain, and the attack is practically always followed by blood in the urine for a time. The soreness following the gall bladder attack will last much longer than the soreness following a case of stone in the kidney or ureter. In the diagnosis and treatment of all cases of cholecystitis we should not wait for jaundice and cholelithiasis to make their appearance nor does it matter so far as the treatment is concerned whether there are present in the gall bladder, gall stones or a cholecystitis. The treatment in both cases is purely surgical, and an operation is indicated whether the disease has progressed to stone formation or not.

Now let us inquire into the cause of gall duct diseases. This pathology is brought about in every case by infection. The first stage of gall duct diseases is always an infection, followed by stagnation of the bile, which stagnation leads to stone formation; these stones cause the colic which results in the jaundice, so you see the chain of events, one following upon the other from the infection to the jaundice. The majority of observers believe that because of the failure in the functions of the liver, all the bacteria which the liver receives through the portal circulation are not destroyed, and that living organisms gain entrance to the gall bladder by direct invasion of the mucous membrane. This direct route, however, is probably the less frequent route of infection. According to Rosenow, the greater number of infected gall bladders results from bacteria brought through the capillary circulation of the walls of the gall bladder. This fact is borne out by cultures taken from the contents of the gall bladder, and found to be sterile, while a portion of the same gall bladder ground up would yield colonies of bacteria, which when injected into the blood stream of animals will produce acute inflammation of the gall bladder in 80 per cent of them. This would seem to prove that the infecting agent reaches the gall blad-

der by at least two different routes, and probably a third.

Almost all gall stones are formed in the gall bladder. Ninety-eight per cent of all gall stones by weight is cholesterin, which is the product of the epithelial cells lining the gall bladder. In the formative stage gall stones are soft and putty like, and then they begin to crystallize, just as maple syrup crystallizes, and accumulate in the gall bladder. Gall stones differ from urinary calculi, which calculi are many times the result of precipitation of urinary salts. Gall stones begin to produce trouble, first, and most commonly, in the gall bladder. One has pain in the gall bladder region, and this pain may be recurrent for years. Secondly, they cause trouble when they begin to pass through the cystic duct, which gives rise to typical colic without jaundice. Colic is the result of a foreign body passing through a living tube. When the stone has progressed far enough from the cystic to the common duct, then, for the first time jaundice occurs, and if the stone is large enough to produce obstruction of the common duct, the jaundice will continue as long as the stone is in motion and the obstruction remains. If the stone is small enough to allow some bile to pass around it the icterus will slowly subside to a mild bronze color, which may be present for 2 to even 10 years, or until the stone begins to move again, and again obstructs the common duct. Cholelithic jaundice never occurs unless the stone gets into the common duct. Every gall stone is primarily an infection sequence, these foreign bodies by their presence in a more or less infected zone stimulate the production of cholesterin, which in turn keeps increasing the number of gall stones. These gall stones do not cause colic until they begin to pass through the duct; after reaching the common duct the stone may or may not produce jaundice. If the jaundice is not preceded by colic, the chances are 96 per cent that it is not jaundice due to cholelith. If, on the other hand, the jaundice was preceded by colic or recurrent colicky pains the chances are 90 per cent that it is a cholelithic jaundice.

Now as to the treatment of gall duct diseases: The treatment in every case of gall duct disease, whether it is in the beginning or final stages, is surgical. Every case of gall duct disease is a surgical case. In all operations on the gall blad-

der or bile passages, a great advantage will be derived from the use of a sandbag or air cushion of considerable thickness, placed at or a little above the level of the liver. In addition to this, it will be found convenient to so tilt the table as to raise the head of the patient from 4 to 6 inches; by these procedures the intestines fall away from the field of operation, and the liver is made to present itself forward, and the gall bladder and gall ducts become more accessible to the operator. As to the incision of choice, I shall have nothing to say, there being almost as many incisions, or modifications of the classic incisions as there are operators. This much, however, I will say: it is advisable whatever incision may be used that it be of sufficient length to enable the operator to work with freedom and dispatch. Many operators and investigators claim that jaundice has no appreciable effect upon the coagulation time of the blood, and therefore jaundice does not form a contrindication to operation. As to whether the gall bladder should be removed or not in a given case must be left to the discretion of the operator. His decision in the matter will depend upon the general condition of the patient, the power to withstand the operation, the condition of the associated organs, namely, stomach, duodenum and pancreas. These factors, along with the experience of the operator, should have more weight in arriving at the decision whether or not to remove the gall bladder than the examples or practices of the more eminent surgeons in this field of work. Now let me illustrate just what I mean by the foregoing statement.

Mrs. M., aged 68 years, operated on January, 1919, with only drainage of the gall bladder. In this case we found the general condition of the patient poor and unable to withstand a long, tedious operation; her trouble was of long duration, and many adhesions between the colon and stomach and liver obstructed a free and easy access to the gall bladder. Judging from the pathological condition of the gall bladder only, this gall bladder should have been removed, but we satisfied ourselves, and the after course of the patient proved the wisdom of the decision, that it was wise to only drain. In fact, my experience received at Deaver's clinic some two years ago, stood me in good stead in this case. In his clinic, Deaver drains all complicated cases, and

the mortality of his drainage cases is apparently higher than his cholecystectomys. As I do not wish to make this paper a compilation, I shall not enter into a discussion of the relative values of cholecystectomy and cholecystostomy; however, it is my belief that many gall bladders are drained when the patient would have benefited by their removal, and I might also add that many cases of cholecystostomy fail to be relieved, not because the gall bladder was not removed but because the drainage tube was removed too soon. We have come to believe that the drainage tube should be left in the gall bladder for a period of at least three weeks.

As to the method of choice of removing a gall bladder, whether one begins at the fundus or neck, is of little importance, the important thing being the complete removal of the gall bladder and cystic duct down to the common duct, and the patient, thorough search for stones in the common duct. The removal of the gall bladder does not prevent the drainage of the common duct, although it is a safer procedure if one wishes to establish thorough drainage of the common duct, and wishes to relieve the pressure on the pancreatic duct, to leave the gall bladder in place, and drain through this structure. At this point, it might be well to emphasize one of the dangers of removing the gall bladder, and that is injury to the common duct. Again, let me illustrate this by a mishap that occurred to me some time ago. At the operation the gall bladder was removed by our usual method, the incision closed with iodoform gauze drainage down to the stump of the cystic duct, near where it joins the common duct. This gauze was removed on the second day following the operation, and all went well until about the tenth day. The patient at this time developed an intense jaundice, which we were unable to account for, as we had examined the common duct and were morally certain that no stones had been overlooked in this structure. In about 24 hours bile began to escape from the incision and we then saw the cause of the jaundice. The jaundice cleared up in due time, but there was a biliary fistula that would not heal. At the second operation we found a considerable opening in the common duct above where the cystic duct had entered. This opening was undoubtedly caused by some injury to the common duct at the previous operation. This defect was

closed over a small T-shaped drainage tube, which tube was removed at the end of 3 weeks, leaving a sinus that closed in a few days.

After the removal of the gall bladder the ducts hypertrophy and overcome the action of Archibald's muscle and keep the bile moving into the intestines as it is secreted by the liver. There is almost always a dilatation of the hepatic and common ducts following the removal of the gall bladder. There seems to be no ill effects from this continuous flow of bile into the intestines.

In closing, let me earnestly urge you as surgeons to do all within your power to destroy the false notion among the laity and some physicians that gall stones are the essential factors in calling for surgery of cholecystic diseases. It would be a great step forward if it were understood generally that the infection is the major issue in this, the greatest of the upper abdominal troubles. There would be less difficulty for the surgeon and fewer cases reaching the stage where a cholecystectomy is necessary, and a great saving in the surgical mortality of these cases. Upon these points all surgeons are agreed, and it is our duty to teach our medical brethren this very important lesson. Diseases of the biliary passages are essentially surgical and not medical, and the most common cause of failure to cure or relieve your patient is late operation. Until this fact has impressed itself upon the physicians, as well as upon the laity, we cannot expect to improve our percentages of cures of cholecystic diseases. Let us establish the fact that cholecystic diseases are surgical, first, last and always, until it becomes as well known by the laity as is the fact that appendicitis means operation. When we have succeeded in making cholecystic diseases mean operation, then there is no excuse for a failure to improve our percentage of cures.

EPIDEMIC ENCEPHALITIS*

S. S. WINNER, M. D.,

Illinois State Department of Public Health

CHICAGO

(LETHARGIC ENCEPHALITIS—SLEEPING SICKNESS—NONA.)

The first case of epidemic encephalitis to occur in the State of Illinois, as far as we can ascertain

* Read at the Sixty-ninth Annual Meeting of the Illinois State Medical Society, at Peoria, May 22, 1919.

at the present time, appeared some time in the latter part of October, 1918, in the vicinity of the Great Lakes Naval Training Station, with a history strongly suggestive of epidemic encephalitis, although it was not diagnosed as such at the time by the attending physician. This case, from the data obtained, was mild in character and recovered in a comparatively short time. It is significant that this very locality was the very first to be affected by the influenza epidemic in September, 1918.

The first definite case to be reported to the State Department of Public Health of Illinois, and diagnosed as epidemic encephalitis by Ticken of Chicago, occurred in that city in November, 1918, Ticken reporting 14 cases of this disease up to the end of February, 1919, eleven of whom died; Bassoe 7, four of whom died, and Elliott 4, two of whom had died, for the same period.

In all there had been reported, up to the time of the compilation of this paper, some 90 cases in the State. There have been undoubtedly a number of cases, most of them of a mild character, that occurred in this state since the fall of 1918, that have not been reported, the true nature of the disease not having been recognized. I am led to make this statement from the information received from physicians in the various parts of the State.

Before proceeding with an analysis of the cases that occurred in Illinois, I will endeavor to present a brief summary of the literature on the subject, with some of the conclusions arrived at by investigators here and abroad:

Briefly mentioning the "sleeping sickness" in connection with the grippe epidemic in 1718, recorded by Camerarius, the "Coma Somnolentum" of the grippe epidemic recorded by Lecoque de la Cloture in 1768, and the "Catarrhal Fever with somnolence," recorded by Ozanann as having occurred in Germany in 1745, in Lyons in 1800 and in Milan in 1802, all of which records are indistinctive, and may or may not have been the morbid entity known as epidemic encephalitis we are dealing with at the present time, we pass on to the period of the fairly well recorded epidemic of 1889-1890, when "Nona" made its appearance first in Italy, then in Hungary, and thereafter in Germany and France, following the course and sequence of the influenza epidemic. The disease, as described by the writers of that

period, followed in the wake of the grippe, was characterized by somnolence and paralysis of some of the cranial nerves, with most of the cases running a very mild course. In an article read before the Chicago Medical Society in 1891, Archibald Church, analyzing the nervous complications and sequelæ of the epidemic in this country does not mention any cases as having occurred here, so we may take it for granted that prior to 1918 the morbid entity known as epidemic encephalitis had not been recognized or encountered here.

At a meeting of the Vienna Medical Society of Psychiatry, held in April, 1917, von Economo described a group of cases of a disease occurring in an epidemic form at that time in Austria, and to which he applied the term of "Encephalitis Lethargica." From the data presented by von Economo, it is evident that the disease occurred in epidemic form in Vienna in the winter of 1916-1917.

A discussion concerning the same subject was held the following month in Paris by the Academy of Medicine, and Prof. Netter there expressed the opinion that the disease was not a form of acute poliomyelitis. A large number of case reports and discussions appear in the transactions of the French Medical Societies at this time.

The first case to be noted in England occurred February 11, 1918, the largest number of cases in one week being 18, which occurred in the last week of April. The number of cases thereafter, and the epidemic, which never attained large proportions, came, at least temporarily, to an end in June.

The disease had been made reportable in England, under the name of lethargic encephalitis. In the early part of 1918, the local government board, with the assistance of the Medical Research Committee, instituted clinical and pathological investigations, the results being published by H. M. Stationery Office, London.

The following data are abstracted from a review of the Government reports, published in a recent number of the *British Medical Journal*:

The disease is an acute affection, due to a specific virus, which, like that of acute poliomyelitis, probably finds entrance through the nasopharynx and which, like it, has a special affinity for the nervous system, though for different areas and elements.

Pathologically, lethargic encephalitis belongs to

the class of polioencephalitic diseases, which are inflammatory in nature. Bacteriological investigations have not yielded any results.

Clinically, the disease is a general infectious disease, characterized by manifestations originating in the central nervous system, of which the most frequent and characteristic are the progressive lethargy, and lesions in and about the nuclei of the third pair of cranial nerves. Although a rise of temperature was not observed in all the 164 cases of which notes were obtained, there seems to be little doubt, that there always is a certain amount of fever in an early stage, although occasionally it may not be observed for several days after the onset of the symptoms. The common range is between 101-102, but temperature up to 104 are not uncommon. The pyrexia usually lasts from 2 to 5 days, but may continue for ten or even 14 days. It may fall gradually or suddenly with oscillations. Subnormal temperatures have been noted.

A prodromal period is described, the symptoms being the early stage of the developed disease.

The cardinal symptoms given are lethargy, mask-like face, facial paralysis, catalepsy, rigidity of muscles, ophthalmoplegia, ptosis, unilateral or bilateral and febrile reaction.

Dr. McNalty of the committee recognized seven groups of cases: (1) Clinical affections of the third pair of cranial nerves. (2) Affections of the brain stem and bulb. (3) Affections of the long tracts. (4) The ataxic types. (5) Affections of the cerebral cortex. (6) Cases with evidence of spinal cord involvement; and (7) the polyneuritic type in which affection of the peripheral nerves is suspected.

Among 168 cases 37 deaths were recorded. The duration of the stupor is very variable, occasionally it lasts two to three days, more often two to five weeks, and in one case, which eventually recovered, eight weeks. Certain manifestations have persisted after three months, like alterations in the mental condition, persistent cranial palsy (nerves), the appearance of paralysis, apparently of spinal cord origin, and athetosis.

S. A. Kinnier Wilson, writing in the *London Lancet* of July 6, 1918, reports 13 cases, seven of which are related in his paper, two with necropsies. The clinical features are thus summarized by Wilson:

Epidemic encephalitis is an acute nervous disease characterized by both general and localizing symptoms, in a minority of cases the latter not being prominent. The sexes are affected indifferently and there is no age incidence specially. Its onset is relatively acute, the conditions being established within a few days, occasionally it opens in a fulminant fashion. General symptoms consist of apathy, lethargy, drowsiness, pathological sleep, stupor, absence of initiative in one form or another being prominent from the onset and throughout at least the earlier stages of the disease. Some times the

lethargy appears later in the disease; occasionally, it is not a noticeable feature.

Wilson considers this epidemic in every way analogous to the one which occurred in Vienna in 1917, and the similar epidemic in Paris in the spring of 1918, as described by Netter, from a pathological as well as clinical view.

The French cases were reported exhaustively by Netter, Saint-Martin, Lhermitte, Chanffara and Bernard and Paul Sainton, with two necropsies by P. Marie and C. Tretiakoff. Paul Sainton gives the following definition of the disease:

A toxic, infectious, epidemic syndrome, characterized clinically by a triad of symptoms, consisting of somnolence, palsies of the motor nerves of the eyeball, and a febrile state, and anatomically by a more or less diffuse encephalitis, situated chiefly in the gray matter of the midbrain. In addition to the nerves supplying the eyeball the facial nerves are frequently involved, and sometimes the motor branch of the fifth and hypoglossal. There may be also analgesia of the face from involvement of the sensory portion of the fifth.

Sainton does not consider this a new disease, nor a form of poliomyelitis, nor an entirely independent disease. He, too, identifies it with the "Nona" described during the great epidemic of 1890 and he considers it very significant that the disease has reappeared during a new pandemic of influenza. Although admitting that positive evidence, especially of a bacteriological nature, is lacking, he is inclined to look upon this as a special form of influenza.

Saint-Martin and Lhermitte emphasize the diagnostic importance of the two chief symptoms, lethargy and oculomotor paresis. They also point out that the main pathological lesion is found in the gray matter beneath the Aqueduct of Sylvius. This region has long been recognized as peculiarly vulnerable to toxic and bacterial agents. Thus, it is the location involved in the acute hemorrhagic polioencephalitis, long ago described by Wernicke, in which, however, the involvement is more extensive and the symptomatology much more complicated. These two authors are not willing to deny the relationship between the encephalitis and poliomyelitis, and they did add the information that in the part of France where their observations were made, an epidemic among fowls, resembling human poliomyelitis, existed at the same time.

The two necropsies reported by Marie and Tretiakoff, both show acute inflammatory changes in

the brain stem, especially in the region of the Locus Niger and the nuclei of the oculomotor nerves. They comment on the resemblance to the hemorrhagic superior encephalitis of Wer-nicke.

The mortality in France is given as 35 per cent, in England 25 per cent, and in Austria as 4.5 per cent.

There is a distinct fulminant type, described by these writers, with persistent high temperature, complete lethargy or intervening delirium, a profound toxic state, with foul breath, tremor, sphincter relaxation and bedsores. Death in these cases occurs in from eight to twelve days.

In concluding the summary of the study of those cases abroad, I wish to refer briefly also to the "Mysterious Disease" of Australia, to which Wilson referred as probably identical with the epidemic encephalitis in England, and reported by A. Breinl in the *Medical Journal of Australia*, March 16, 1918. Breinl considered these cases as an aberrant form of acute poliomyelitis. Matthewson, in the same journal of October 27, 1917, reports as having had under his care seventeen patients at the Brisbane Children's Hospital, suffering from a similar disease, out of which number eleven died. The onset was mostly sudden. A child, previously healthy, developed a high temperature and was seized with convulsions, which continued with intervals of semiconsciousness for days, the child afterwards lapsing into stupor. In other cases the onset was insidious, the child complaining of headache and vomiting, and passing into a stuporous condition. Three of the six patients that had recovered had not regained normal intelligence. The spinal fluid in these cases was negative. The report of the histopathology of the brain and upper cord of one case, described the main changes as a widespread congestion of the blood vessels of the brain and spinal cord and an infiltration in the adventitious sheath, with large and small mononuclear cells.

Practically the first intimation of the existence of epidemic encephalitis here was when Bassoe, during the discussion on influenza before the Institute of Medicine of Chicago, as reported in the *Journal A. M. A.* of March, 1919, stated that during the last few weeks he had seen several cases, which were characterized by marked drowsiness and paralysis of some of the cranial nerves, especially ocular and which otherwise corresponded to

the clinical picture of the lethargic encephalitis reported abroad, and that he knew of similar observations by other physicians.

Pothier, in the *Journal A. M. A.* of March, 1919, reported the clinical details of eight cases, with one necropsy. Bassoe reported twelve cases in the *Journal A. M. A.* of April, 1919, with complete necropsies of two cases, showing practically the same pathology in both cases and similar to the pathology of the cases reported from abroad.

Following a conference with a number of physicians, who had had the opportunity to carefully study the clinical and pathological phenomena as manifested by these cases, Dr. C. St. Clair Drake, Director of the Illinois State Department of Public Health, promulgated, on March 7, 1919, an order, making all cases of epidemic encephalitis or suspicious cases reportable and subject to isolation, and assigned me to a study of the cases that may be reported by the physicians in Illinois.

In all I have examined about sixty cases of reported epidemic encephalitis, 41 of which proved to be, from the clinical picture presented and the laboratory tests performed, cases of the morbid entity known as epidemic encephalitis.

A careful survey of the data obtained from the study of these cases shows the following interesting results: Age incidence. Four cases occurred between the ages of 1 and 5 years. Three cases between the ages of 5 and 10. Six cases between the ages of 20 and 30. Seven cases between the ages of 30 and 40, and ten cases in ages above forty. The youngest was a baby 9 months of age, and the oldest patient one of 62 years of age.

Sexes affected: Twenty of the cases were male patients and twenty-one cases female.

Seasonal incidence: The earliest case on record occurred in the latter part of October, 1918. The months of greatest incidence seems to have been December, 1918, and January and February of 1919. The number of cases began to decrease during March, and showed a decided falling off in the latter part of April.

History of influenza: Of the 41 cases under consideration 18 gave a history of having had influenza, from several weeks to several months prior to the encephalitis. Practically all the cases were cases of uncomplicated influenza, with the exception of one case that had a bronchopneumonia in connection with it. All the cases

ran a mild influenza course, with the one exception, with an apparent recovery in few days.

History of past nervous disturbances: One case had had an attack of poliomyelitis when eight years of age (the patient was 23 at the time of the encephalitis), one case gave a history of cerebrospinal meningitis of the epidemic form years before, most of the cases gave histories of nerve fatigue immediately preceding the attack of encephalitis.

Symptoms in order of their frequency:

Parkinsonian face in practically all the cases.

Lethargy in all except in two cases, who showed a wakeful delirium all through the disease.

Spasticity of the muscular system in all cases except three.

Ptosis, unilateral or bilateral, found in 20 cases.

Speech disturbances in 18 cases.

Eye divergence and ocular rigidity in 18 cases.

Diplopia in 16 cases.

Headache of frontal variety in 14 cases.

Retention of urine in 13 cases.

Nystagmus in 11 cases.

Pupillary disturbances in 11 cases.

Cervical rigidity, in a variable degree, mostly slight, found in 11 cases.

Incontinence of urine and feces in 11 cases.

Tremors in 10 cases. Tremors were more marked on touching the patient, although some cases showed both rest and intentional tremors.

Facial paralysis in 9 cases. This number does not include cases where there was a paretic condition, but only cases where facial paralysis was well marked, in the majority of cases unilateral.

Vomiting and nausea occurred in 7 cases, in the early stages of the attack.

Definite paralysis of the limbs in 7 cases.

Pain on passive motion in seven cases.

Tongue weakness, with inability to protrude, in 6 cases.

Difficult swallowing in 6 cases.

Droping, with excessive salivation in 4 cases. The majority of cases complained of a dry condition of the mouth.

Sensory disturbances in 2 cases.

The reflexes were very inconstant, sometimes increased, mostly normal, occasionally decreased. Babinski, and sometimes a Kernig, were aberrant

features of this condition. Ankle clonus noted in a few cases.

The temperature and pulse varied quite a little. As a general rule, the temperature did not rise very much, about 100 to 102, some cases however showing a rise to 105 and 106 just before death. A number of cases showed a subnormal temperature some time during the attack.

The pulse in about 50 per cent of my cases, was comparatively slow and did not increase in frequency with the rise of temperature. Several cases at the time of examination had a pulse as low as 40, with temperature of 101 or 102.

Laboratory Findings. The spinal fluid was found practically negative in all the cases where a spinal fluid analysis had been made. The pressure was very little, if at all, increased, the fluid appeared clear, the cell count showing a slight increase, and in some cases globulin positive.

The bacteriology and culture of spinal fluid was negative. Blood examinations showed leucocytes varying from 7,000 to about 10,000. Two cases showed a leucocytosis up to 25,000. Blood cultures were negative. Blood pressure about normal, with several of the cases showing a lowered blood pressure.

Urinary findings were negative, with the exception of a few cases where traces of albumin and a few aberrant casts were found.

Mortality. Out of the forty-one cases examined and classed as epidemic encephalitis, sixteen had died up to the time of the compilation of this paper. The prognosis in cases that lasted longer than a few weeks, as a rule, was favorable, as far as life was concerned, the majority of the cases that died succumbing within one or two weeks from the onset of the disease.

Treatment. Purely symptomatic, with spinal tapping affording transient relief.

CONCLUSIONS

First. The disease appears to be more prevalent among adults than children.

Second. Season of greatest incidence during the colder months of the year.

Third. Sexes about equally affected.

Fourth. Influenza plays an important part as a predisposing factor, as far as we can ascertain at the present time, from the history of the present cases and past epidemics. Fatigue, especially nerve fatigue, is a potent predisposing factor.

Fifth. The clinical and pathological pictures of the cases here are practically analogous with the cases reported abroad.

Sixth. Strong clinical and pathological evidence that epidemic encephalitis is distinct from classic poliomyelitis. This is also supported by animal experiments undertaken abroad, where inoculations with emulsions of nervous material, under conditions in which poliomyelitis has been transmitted to monkeys, failed to produce a paralysis.

Seventh. The causative factor is unknown. The presumption of the influenzal virus, gaining entrance through the nasopharynx, becoming active upon a vitality lowered tissue, is, at least, as plausible as any advanced theory so far.

Eighth. The prognosis, as far as life is concerned, is more favorable if the case lasts longer than a few weeks. Ultimate complete recovery is the rule rather than the exception.

Some very interesting experiments, published in the *NEW YORK MEDICAL JOURNAL* of May 3d, 1919, by Strauss, Hershfeld and Loewe, tend to throw some light on the etiology and transmission of the disease. The authors report a series of experiments with monkeys. Inoculations with emulsions of human brain produced lesions characteristic of the lesions found in epidemic encephalitis. The inoculation of the filtrate of the mucous membrane of the nasopharynx of a patient not suffering from epidemic encephalitis produced no evidence of the disease in the monkey. The inoculation of the washings of the nasopharynx of a case of epidemic encephalitis produced paralysis in the monkey accompanied by pleocytosis in the spinal fluid. A filterable virus obtained from the mucous membrane of the nasopharynx in a fatal case of epidemic encephalitis produced hemorrhagic encephalitis in the monkey. This virus has been carried through a second generation.

THE LOCAL HEALTH OFFICER AND HIS PROBLEMS*

E. W. WEIS, M. D.,
LA SALLE, ILL.

The problems that confront the health officer in the State of Illinois are so many and varied

that it will be impossible to speak of all of them, but we can discuss the most important. Before considering the problems it might be well to look at the question of the personnel of the officers as found in the different cities of the State.

As found today the health officer is one who is chosen by reason of politics or as a means of helping a young doctor to live until he acquires enough practice to do so. The question of fitness by reason of special training is not thought of. Therefore it is easy to see that many of the problems confronting us are not solved in any uniform way but are dependent upon the personal view of the officer, controlled, however, by environment, politics or the desire to make capital for future professional advancement.

This is based primarily on the fact that in the vastly larger percentage of the health officers of the State they are not paid a sufficient salary to make them independent in their action. While it may be true that they are getting all they are worth and in some instances probably more, under the present condition of things, it is also true that by just this very reason the public does not get the benefit that it is entitled to. This brings us to the first problem, that I believe is one of primary importance, namely, that of the full paid, full time health officer whose time, energies, and capabilities should be devoted exclusively to the teaching of hygiene and compelling thorough and complete sanitation. The trend of the times is marching to this proposition and there is no excuse for any locality in the State not to have at least one man devote himself to this work exclusive of everything else. In the larger cities where the taxable property is sufficient to maintain such an officer it requires no argument to emphasize the fact and under our present State laws the smaller communities can join together, two or more, and employ such a man, and if the bill that is now in the Legislature becomes a law those counties containing only small villages can have a county medical officer. The handwriting is on the wall, the public is aroused to the importance of this question, and we as physicians ought to do everything in our power to help its advancement. The advantages of a complete sanitary system are known and understood by the public because of the wonderful work done by the sanitarians in our army. It has been brought home to us with remarkable

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force the benefits derived by the incessant scientific activities in the camps and their immediate surroundings. Never before in history has there been such an aggregation of people with so little percentage of morbidity and mortality. When we contrast the results of the Spanish-American war and the world war it speaks well for the advancement of sanitary science. This new knowledge has come to the people and they are demanding greater and better protection. They have a right to it and they are going to have it, and the very insistence of their cry is reflected daily in the press, public gatherings and in private demands.

I think I am competent to say that I know whereof I speak, for as director of the Hygienic Institute of La Salle, Peru and Oglesby (which was established by the late Mr. F. W. Matthiesen) and as Commissioner of Health of those three cities I get it from three sides, and as I am a full paid, full time health officer I can appreciate to its fullest extent the duty that devolves upon me in determining the solution of the many, many problems that confront us daily. While it is true that the position I occupy is a rather unique one in that I represent a corporation within three corporations, the work done by us can be almost duplicated by any full-time health officer in any community, at least sufficient for their needs in the proper carrying out of sanitary rules and regulations and to prevent the further spread of communicable diseases.

The health officer to be successful must have the cordial if not enthusiastic support of every physician in his town and at least the moral support of those in neighboring communities. Alone, even if backed up by the police power, he is impotent in many directions, but by united team work wonderful results can be accomplished. This was exemplified in our recent epidemic of influenza. The health authorities of many towns and cities in our neighborhood worked together by advice and conferences. And it was agreed that the restrictive measures adopted should be uniform in all of them.

Probably the most difficult problem confronting the sanitarian is the ferreting out the original case of cause of contagion either of typhoid, diphtheria or scarlet fever. If from an acute, rather severe case it is easy, but if from a mild one or from a carrier only, then the trouble thick-

ens. The case may have been so mild as not to attract attention from either the family or school nurse, and if from a carrier then many are placed under surveillance until the positive one is determined. Just this happened in Oglesby some months ago. A scholar with a mild case of scarlatina, being anxious to continue in school, never complained either at home or in school. He was only discovered when several weeks had elapsed by his peeling skin. By then the school had been set on fire and it required much action to control the disease.

"Am I my brother's keeper?" This text can furnish us quite a sermon in sanitation and it was brought forcibly to mind in a very recent happening. To the south of our city there is a small village of about 500 inhabitants that was badly ridden with smallpox, and had been for from six to eight weeks. It had been erroneously diagnosed as chicken pox, and probably would have been the focus for a general infection had not one of the patients come to our town to consult a physician for a sore eye. The physician noticed that she was covered with peculiar looking pustules. It required no expert to recognize it as a positive case of variola. She was immediately removed to our Isolation Hospital and the State Board of Health notified. Officially our connection with the condition ceased right there, but being anxious for the protection of our own people I made it my business to visit the village and investigate for myself. A sad state of affairs was found to be existing, men, women and children were walking the streets broken out in all stages of the disease; absolutely no precautions had been taken. In one industry where some 300 men were employed it was found that some of those who had the disease, but were not yet entirely free from the contagion, were working alongside of others, and among the employees were a number who live in our town, and in other neighboring cities, going back and forth daily. My services were proffered to the local health authorities in the village to do the best that could be until the state representative arrived. Another instance of similar character was in another city at some little distance from us, where it seemed that all of the precautions necessary to prevent the further spread of contagion had not been taken, and where there was a proficient local board. I visited the town, investigated condi-

tions and urged a most thorough compliance with the regulations. I think this a problem, for the reason that we can not expect the State authorities, with a limited number of field men, to be everywhere, and it certainly should devolve upon the men who have charge of large communities to act in the capacity of the text of this paragraph, I am my brother's keeper.

There is another problem that confronts the sanitarian that I believe should be definitely settled and I trust that there will be sufficient discussion from every query to finally settle it. I refer to fumigation. We all know that fumigation as it is practiced today is a farce, that most of the fumigators that are in use are simply for the purpose of camouflaging the public, and for commercial purposes. Fumigating cans and candles are inadequate, and I do not think in one-tenth of the cases where they are used that actual benefit results except psychologically, and if it were used in adequate quantities the price would be almost prohibitive, although I understand that permanganate has had a great fall. The public here in the west seems to demand fumigation simply because that is what they have always been taught, and the health officer as a rule has not got backbone enough to insist that a thorough scrubbing and a wiping down of the walls, with plenty of sunshine and fresh air, with the possible use of a disinfecting solution, and a thorough boiling of all cloths of contact is sufficient. I have been informed that in the East, New York, Boston and other places, they have quit fumigating altogether, and so far as I can learn the results are the same. If this is true, why subject our towns, cities and school boards to the unnecessary expense of purchasing these materials, with the added expense of employing men to apply them. I would like a general expression upon this subject and I hope that you will give it. This is a problem that we are confronted with continuously and will be more and more. As you know, variola is rather prevalent and this problem will confront each sanitary officer in every community in which it is found.

And now we are confronted with an entirely new problem, one that will tax our ingenuity for its proper handling, but solved the problem must be for its importance is so great when we consider that its victims are more numerous and its results farther reaching than any of the ordinary

or more common communicable diseases. I refer to the control of venereal disease. Viewed from the economic side it is more destructive to health and well-being, and has shattered more minds than almost any other factor. I have recently heard a surgeon make the statement that 84 per cent of his operations were made necessary by the sequellæ of venereal disease.

As you all know, the new law of the State Department of Public Health makes it incumbent upon physicians to immediately report every case to the local health officer. Where he does so by code number he assumes responsibility for the correct and proper care of that case, to prevent its further spread. In this report he must state the possible as well as the probable source of infection. In larger communities I am safe in saying that this source may be readily surmised but in smaller communities, where segregated districts are eliminated, there is unanimity that the source is the common street walker. While it is easy enough to control so far as further infection is concerned, the patient who comes to the doctor or the druggist it is not so easy to control the source of the infection. How are we going to deal with this problem? I have given this matter much thought and have finally come to the conclusion that about the only way will be to co-operate with the Federal Government in its publicity scheme by whatever method to adopt possibly the following:

After the subject has been brought to the attention of our communities as it soon will be by moving picture films, publications, pamphlets and other means, so that the public will be prepared to understand its significance, my plan is to publish in the local press the number of cases reported and giving as the source that mentioned in the report. I am inclined to the belief that this publication will in a very short time drive every unescorted woman off of the streets at night, for it will allow of only one inference, that they possibly and more than probably are the source of infection. Decent women would not dare to be seen for fear of being classed erroneously, and it would be a common matter for speculation that the others are the guilty ones.

What would be your scheme?

DISCUSSION

DR. A. L. MANN (Elgin): Dr. Weis has presented the fundamental principles of the problem so char-

acteristically and so exhaustively that it is hardly worth while for me to say anything about it.

Any business depends for its success upon management. If that management is subject to municipal or state or national control, it is of necessity handicapped, perhaps disadvantageously. Red tape, iron clad rules, or the lack of rules, established for the guidance of management is disastrous and destructive.

That is the principal problem with which the health officer has to deal—the passing of the buck, to use a classical expression, all the way from the mayor down to the chief of police in municipalities. The health department should be a separate and distinct department of municipal government. It should be presided over by a competent head, vested with the power to carry out the rules and regulations of the department as established by that department or the superior department of which it may be an integral part, the State or National department.

My idea of the personnel of the organization should be the commanding officer, the medical health officer, who should have as his lieutenant a sanitary officer, one or more inspectors according to the size of the community and sufficient clerical assistance to enable him to give such of his own time as may be required to the laboratory. That is the essential part of the health department and it is the only way in which communicable diseases can be controlled.

The organization must be entirely independent of politics and it should be subordinate to the state authorities and not be subordinate to the municipal authorities. The municipal authorities can establish their health department, but once established, it should be subject only to the state authority.

When we place a quarantine we can't release it, we can only ask the State to modify it.

I want to say just a word about smallpox. We have had our trouble with that. We have just gotten through with a little flurry of it and I want to make an appeal for the repeal of the quarantine laws on smallpox. How does it strike you? I want the quarantine laws on smallpox repealed. I want a smallpox patient privileged to walk the streets if he wants to—to go and come as he likes.

There are two sides to that perhaps. I can only see one. You will admit there is only one way to control smallpox and that is by vaccination, successfully accomplished. If necessary, repeat it half a dozen times. You can't compel anybody to be vaccinated under the law. The only way you can compel them to be vaccinated is to let them rub noses with a case of smallpox and then I can assure you that 99 per cent of the Christian scientists, the chiropractors, the osteopaths, and all the other alienated individuals will be vaccinated as I have had an opportunity to demonstrate.

Dr. Weis is perfectly right about fumigation. It is an antiquated procedure. It has no merit and should be dispensed with, but you cannot make them

scrub; it would take the United States army to do that.

In regard to the venereal disease proposition: Dr. Weis, I am a little bit inclined to dispute the idea of publicity and not allowing ladies on the street after seven o'clock alone. We live in a factory town and most of the people that get down town after supper are ladies. They have to go at night, for they have no other time, and on certain nights you will find our streets crowded worse than State street with ladies, either singly or in groups, and I will concede that some of those ladies might bear investigation, but not all of them. We have no public source of venereal diseases of various forms, and yet we have plenty of it. Where does it come from? The treatment of the disease by druggists falls within the pervue of our department and it is a big question which we must consider.

DR. C. ST. CLAIR DRAKE (Springfield): Dr. Mann has made an appeal for the revocation of rules for the control of smallpox. That is the Bracken idea, Dr. Bracken, the health officer of Minnesota, who advocated that a number of years ago. One of the great functions of the State Department of Public Health is to protect the individuals who will not take the trouble to protect themselves. If a man will not be vaccinated and protect himself against smallpox, it is our function to see that he is provided for if necessary.

On the disinfection proposition, I didn't hear all of Dr. Weis' paper. The State Department of Public Health for a number of years has abandoned fumigation. We do, however, recommend a thorough disinfection, to prevent the recurrence of the disease, by scrubbing, airing and sunning.

DR. ROBERTSON: May I follow with one point on disinfection? If this is money wrongly spent, I shouldn't be signing requisitions and vouchers for disinfection in Chicago. I don't propose to throw it down in Chicago. It is the best way we have of having our buildings aired. We go in and fumigate and make a big stink and they will then clean up to get rid of the stink. We get them aired all right.

DR. WEIS (closing discussion): I haven't anything further to say except to thank the Doctors for their consideration of this paper.

Adjournment.

THE HABITAT AND DISTRIBUTION OF DANGEROUS STREPTOCOCCI IN THE BODY.*

DAVID J. DAVIS, M. D.

From the Department of Pathology and Bacteriology, University of Illinois, College of Medicine,

CHICAGO.

The habitat and distribution of bacteria outside of the body follow quite different rules.

*Read at the Annual Meeting of the Illinois State Medical Society, Section on Surgery, at Peoria, May 21, 1919.

There are soil bacteria, water bacteria, milk bacteria—all finding their optimum conditions in their respective mediums and dying out quickly when these conditions are essentially altered.

So, on and in the body of animals, the habitat and distribution of the bacteria follow similar rules. *Staphylococcus albus* lives in the skin and is always found there. In the large intestine live normally *B. coli*, *B. welchii* and others; in the stomach acidophiles, in the urethra diphtheroids, in the vagina acidophilic anaerobes; on the nasal mucosa white staphylococcus and often micrococcus catarrhalis, on the teeth and about the gums *B. fusiformis* and spirochætæ, on the buccal mucosa and pharynx streptococcus viridans and often varieties of pneumococci. The above mentioned organisms are the usual predominants in their respective localities. Other bacteria may less constantly occur. As a rule also the above organisms under certain conditions may be pathogenic and are, therefore, dangerous.

Dangerous streptococci, likewise, in habitat and distribution follow similar laws on and in the body. By dangerous streptococci I refer primarily to the hemolytic streptococci of the human type. Other non-hemolytic varieties are dangerous but, on the whole, less so. These latter are principally concerned in causing respiratory infections and constitute a subject in themselves. I shall not discuss them now but will limit myself to the hemolysers.

The hemolytic type is the one primarily involved not only in respiratory disease, but in dangerous wound infections. It is the organism that the surgeon primarily fears. It has killed our soldiers by the score. These hemolytic streptococci are delicate organisms and evidently not widely distributed in nature. They are highly parasitic and usually die soon after leaving the body. They do not grow well on artificial media and are fond of blood, body fluids and tissues. On the human body they are not found normally on the surface. If placed on healthy human skin they will disappear in from 24 to 48 hours without washing, sooner if the skin is cleansed. On filthy or pathologic skins they may obtain a foothold especially on hairy parts. (Schachter.) Normally in the vaginal tract they do not appear. In the stomach they cannot grow or live, the acid killing them quickly, thus also protect-

ing the intestines and rendering the intestinal canal relatively free from this variety of streptococci. The appendix normally appears to be practically free of them. (Kraft.)

In the mouth and throat special conditions exist. Examinations we have made show that in the tonsil crypts occur potentially dangerous hemolytic streptococci in practically 100 per cent.¹ This is true of both normal and abnormal throats. The surface of tonsils, however, gives hemolytic streptococci in only 60 per cent, the pharyngeal surfaces in 25 per cent. The farther away from the tonsil crypts we go the less often they are found. In the mouth and about the teeth they are practically absent except when pyorrhea and abscesses occur. After going over the entire body for hemolytic streptococci we are coming to conclude that there is normally only one natural habitat for them, namely, the crypts of the faucial tonsils. The facts point to this focus as a growth and distributing center for them. They live here just as the white staphylococci live in the skin or colon bacilli in the colon. From here by surface extension, by contact and by dissemination of buccal and throat secretions these cocci are distributed to various parts of the body and to other bodies where, should conditions permit, they may develop.

Moreover, we have shown that after tonsillectomy these streptococci in the throat are much reduced in numbers and frequency. While in throats with normal tonsils the streptococci were found in 58 per cent, in throats without tonsils they were found in only 15 per cent and then in small numbers. Nichols and Bryan² likewise report the disappearance of hemolytic streptococci from throats in 27 per cent of 31 patients 11 days after tonsillectomy. In the small percentage of positives after tonsillectomy their presence may be explained by tonsillar remnants and by chronic infections about the throat, teeth and sinuses. It is possible that hemolytic streptococci may grow in the adenoids and in the lymphoid tissue of the pharynx but observations do not point to these structures as important or common sources. It is difficult at times to differentiate between primary and secondary invasions of these regions.

1. Pilot & Davis, Jour. Inf. Dis., 1919, XXIV, 386, also Davis, Jour. Inf. Dis., 1912, X, 148.
2. Jour. A. M. A., 1918, LXXI, 1812.

These streptococci from the crypts or throat are always more or less virulent for animals. One to 2 cc. of broth cultures intravenously will kill a rabbit; $\frac{1}{2}$ cc. or less kill mice. The strains isolated from tonsils and even from the same tonsil vary some in virulence. Furthermore strains of lesser virulence may by animal passage increase their virulence. By making tonsil crypt cultures from time to time following acute streptococcus tonsillitis I have observed that though the streptococci remain following recovery their virulence decreases.

The idea has commonly prevailed that dangerous streptococci may be found almost anywhere about the body but this does not appear to be the case in the light of recent evidence. It may be that in addition to the tonsillar crypts other foci about the body, especially the various sinuses and folds of the upper respiratory tract, will show these organisms normally. But thus far such possible sources have not been found.

What I have said so far concerns what we may call body or endogenous streptococci. They are the streptococci that are constantly present in some focus ready to take advantage of conditions that permit further invasion of the body. They are the strains that commonly cause secondary infections in influenza, measles, scarlet fever, pneumonias, tuberculosis and many wound infections. In such cases the patients who die are presumably killed by their own hemolytic streptococci coming directly or indirectly from their throats.

There is another group of hemolytic streptococci which we may call exogenous streptococci. They include the so-called epidemic streptococci. They are quite like the first group in general properties but on the whole are of greater virulence, some strains acquiring very high aggressive properties. It is these streptococci that cause milk epidemics of sore throat, epidemics of pneumonia and empyema as occurred recently in military camps, outbreaks of erysipelas, epidemics of puerperal sepsis and epidemics in surgical wards such as that recently described by Keegan³ in the U. S. Naval Hospital, Chelsea, Mass. This last mentioned epidemic is of peculiar interest to surgeons. It began in the nose and throat ward and spread by contact to other surgical

wards. Here it was manifested by sore throat, rise in temperature, leucocytosis, malaise, etc., and then by complications involving often regional lymph glands and sinuses and especially by metastatic infection in surgical wounds and joints. This epidemic was controlled by the suspension of all operations for a period of three weeks, immediate isolation of sore throat cases and elimination from surgical service of all carriers of hemolytic streptococci.

We have, then, the two sources of dangerous hemolytic streptococci, the exogenous which, through milk, contact, droplet infection and possibly in other ways, transmit an infection which is usually highly virulent and epidemic in character and the endogenous source which furnish so many of our secondary and terminal infections, on the whole not so virulent and not so contagious, at least for normal persons, but so often fatal to those whose resistance has been lowered by other diseases or by injuries.

We must also recognize the possibility that the endogenous may become more virulent and aggressive and thus start an outbreak or an epidemic by contact or otherwise. Perhaps this was the origin of Keegan's epidemic in the throat ward. It has been noted that in measles epidemics in military camps secondary streptococcus infections at first not so virulent may later become more virulent and ultimately give rise to primary streptococcus pneumonias and empyemas without measles or other infections as a predisposing factor.

Now a brief statement as to methods of control. The exogenous source of streptococci leading to the epidemic outbreaks should be determined and by methods of isolation, control of milk supply and the like the spread of the infection may be controlled. Usually this can be quite readily accomplished and does not prevent serious difficulties.

The endogenous source, however, is far more difficult to contend with. But now since we are finding that the dangerous hemolytic streptococci do not grow or are not even commonly found any and everywhere about the body but are confined largely to a definite focus the problem is somewhat simplified and does not appear so hopeless. The ultimate solution would seem to be the elimination of these streptococcus car-

³Jour. A. M. A., 1919, LXXII, p. 1434.

riers. Bacteriologically this means practically every person with tonsils and many without who have bad teeth, chronically inflamed throats or sinuses, middle ear infections, etc. Universal tonsillectomy would perhaps go further than any other procedure. But, at least at present, this is impractical. It would greatly diminish the number of streptococci but would not in every case eliminate all the dangerous streptococci in the body. I do not propose—we do not know—at present the solution of the problem in a practical way. I merely now present the problem bacteriologically.

I wish to emphasize this point. Practically every one is harboring typical hemolytic streptococci in their tonsils which can not or have not been differentiated from many dangerous strains of streptococci, from pneumonias and other serious infections. Such streptococci may or may not be responsible for arthritis, iritis, or some other focal infection in the body. But finding hemolytic streptococci in the tonsils may mean nothing in relation to a possible systemic lesion. In fact we may take it for granted that if the examination is made properly hemolytic streptococci usually in large numbers will be found in every tonsil removed. Therefore we may spare our time and effort so far as this point is concerned. However should one find a definite abscess in the tonsils (and I do not mean crypts full of fatty debris and actinomyces-like granules) a bacteriological examination might be of value in deciding the organism involved in the systemic disease.

Finally, may I emphasize that the streptococcus carrier problem is squarely before us. It is assuming as definite form as is the typhoid carrier problem. It should be the aim of all of us, surgeons, medical men, bacteriologists, specialists in whatever line, to make a combined attack on this dangerous organism for too many streptococcus infections are occurring in all branches of medicine. While many difficulties still present themselves, since we are coming to know the habitat, distribution and natural history of this germ, the outlook appears not altogether hopeless. Thus far vaccination and serum therapy in this infection have been disappointing. Perhaps, if more emphasis is laid on the elimination of these organisms from the body, better results will follow.

DISCUSSION.

DR. MUNSON (Springfield): The past winter I have found in my cases of asthma that the recovery has been very slow and difficult. In all of these cases we have found streptococcus hemolyticus, and because they were so slow to improve upon any form of treatment, I had vaccines made from these organisms in each individual case and especially my asthma cases, and I used the streptococcus hemolyticus vaccine. These were made by a very responsible laboratory in St. Louis, and it seemed to me that where this was the real cause, the cases improved.

I think that most all of you the past winter have noticed in your cases a great amount of hoarseness, tracheitis and laryngitis, and in many of these cases where the trouble was prolonged, in making cultures, we found the streptococcus hemolyticus. About the time the epidemic was at its height, I found myself expectorating some yellow sputum one morning, and when a culture was made, I found I had streptococcus hemolyticus. I had a vaccine made and took it. I thought I improved, but I can't prove it. I do believe that in my cases of asthma it was of material advantage.

AMERICAN STUDENTS AT FRENCH UNIVERSITY

Two hundred and ninety-eight Americans in khaki are studying at the University of Bordeaux, sixty of them in the College of Medicine. They come from forty-four states of the Union, Canada, and Nicaragua, the New York delegation leading off with twenty-seven members, and they are alumni of universities from Harvard to Washington. There are 1,200 of them at the University of Toulouse, but the Journal de Medicine de Bordeaux comforts itself with attributing to the "*tres sympathique Lieutenant Wildermann*," in charge of athletics among his compatriots, the reflection that one American at Bordeaux is worth five at Toulouse, so that the advantage is with Bordeaux.

Meanwhile the Bordelais seems to be divided between friendliness for and amusement at the visitors. The American students had been at the university only two weeks when they had their own paper, which goes under the name of Voila. They conclude that the labyrinth of Crete had nothing on Bordeaux, and their opinion of the climate is summed up in the weather prediction from the first page of Voila: "Tomorrow, rain. Remainder of the week, rain"; the following issue, eight days later, bore the announcement: "No change."

The French universities are filled with youth again after the long emptiness of the war. It is appropriate that some of the American youth who helped save French culture should mingle with the returning throng.—*New York Medical Journal*.

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SEPTEMBER, 1919

Editorial

WHO PAYS FOR PUBLISHING THE JOURNAL?

To be honest with you I will tell you it is the advertisers in our JOURNAL. If it were not for our advertisers the annual dues to members would be two or three times the present price. The doctor who fails to read the advertisements in the JOURNAL is standing in his own light, it will only

be a short time until the profession and the community in which he lives will brand him as an old fogey, and he deserves it. For, at great expense our advertisers are preparing new and better remedies and are refusing to advertise these remedies in the newspapers and magazines. How then is the public to be benefited by these remedies if the physicians do not keep informed? Doctor, read advertising pages 17 and 35 of the current issue of your JOURNAL; cut out the latter page, paste it conspicuously and use it religiously when ordering goods or supplies of any kind.

PRIVATE INSURANCE COMPANIES' METHODS AS BAD OR WORSE THAN A COMPULSORY HEALTH INSURANCE SYSTEM

Private insurance companies are spending untold thousands in money trying to prevent the adoption of compulsory health insurance laws in this country. In their work they have had to rely most of all on the medical profession to help prevent the inauguration of this vicious system in our midst.

It can be positively stated that if it had not been for the foresight and energy of the medical profession health insurance would already have been inaugurated in several states. Evidently the insurance people do not appreciate the work done by doctors in this respect. It seems to be the desire of these corporations to make the profession hired men for the insurance companies. At the present time the profession is being treated as shabbily as they possibly could be treated under a health insurance system. Insurance companies have adopted a five and ten cent store treatment for the insured; strong arm methods are being used in taking patients away from the physician who renders first aid. Every unethical method that can be inaugurated to filch a patient from the physician is being practiced, back door methods of gaining private interviews with the injured unknown to the regular attendant are resorted to.

Many physicians are protesting vigorously at present against these tactics. The writer has been very active in health insurance matters for some time and does not approve of the present trend of affairs and the action of the private insurance companies. After weighing a vast

amount of evidence presented to him he is willing to agree that the doctors' complaints are justified and that their position is correct when they say that there is no reason for spending so much energy in fighting the adoption of health insurance laws if we are to be worse off under our present system of treatment from private companies. It is time the profession takes drastic action and expels from the county medical societies the leeches in the profession who are helping the insurance companies to carry on their nefarious work. It also behooves the insurance companies to wake up, correct their faulty methods, treat the profession along ethical lines; otherwise the doctors may see fit to pursue the line of least resistance and allow health insurance to become established here. A WORD TO THE WISE SHOULD BE SUFFICIENT.

PHYSICIANS' POOR INVESTMENTS.

A matter of serious importance to the medical profession, one rarely noticed by the editors of the medical journals, is the deficient education of physicians respecting investments.

It is a sad fact, which is known to all sellers of securities, that lawyers and physicians are "easy marks." The higher the standing of the professional man, the greater is the likelihood that he is a poor investor. This is due to engrossment in his professional studies and a mistaken belief that he is competent to use his own judgment in selecting and comparing investments.

Banks and trust companies, in the larger cities, have officers who are designated to assist business men in selecting and passing on securities. When a professional man reaches the point that he knows the difference between a stock and a bond he usually feels that he has reached the point where he has displayed some fitness for investments. That there are innumerable classes of bonds, and that strictly first lien bonds are the exception and not the rule, is a matter not as commonly known as it should be.

Advertisers of high class investments find the journals published in the interest of the professions a much poorer medium than trade journals going to persons in business lines. In fact, they are so poor that the use of these magazines for advertising purposes is the exception rather than the rule.

Because of the deficient education of physicians respecting investments the editor believes that he would be performing genuine service if he would open a department in the ILLINOIS MEDICAL JOURNAL, to which inquiries as to investments might be addressed, and placed the answering of them in the hands of an investment banker or dealer of standing.

We publish in this issue in the editorial columns a very interesting article from the magazine of Wall Street, and beg to suggest that its republication in full might prove of more genuine value to physicians than some articles dealing with a specialized branch of medicine, which might have no legitimate appeal to the majority of our readers.

THE PROFESSIONS AND THEIR INVESTMENTS

SEVENTH ARTICLE IN THE SERIES "FINANCIAL INDEPENDENCE AT 50"—COMPARISON OF RESULTS SHOWS STRIKING ANOMALIES—USE AND ABUSE OF EDUCATIONAL ADVANTAGES
BY VICTOR DE VILLERS

Before dealing with the main topic of investments for the professional man or woman, we might, without attempting any class distinction make clear for whom this article is primarily intended. One cannot do better than be guided by the Standard Dictionary's ingenious, though broad, definition which places all those in the professional class whose occupation is the result of a liberal education, and involves mental rather than physical labor. Accepting this at its face value, it would seem that every man or woman who uses brains rather than brawn would be swept into the professional fold, and this would not exclude the storekeeper, farmer, or salesman if he directs the energy of others, has a liberal "education" and,—does not perspire too much while working.

Offhand, however, the average person would name followers of the ministry, medicine, law, authorship, teaching, engineering, architecture, science and artistry as forming the principal professions. Business management including the ownership of businesses might well be added, including farming in which scientific methods have so largely replaced the haphazard, hit-or-miss method of our forebears.

A STRANGE PARADOX

Lest the more learned professions like the ministry, law and medicine might take umbrage at the inclusion of so many others in their rather exclusive sphere—in England, members of the three learned professions call themselves "gentlemen of the third estate"—they might well take a leaf out of the farmer's investment book, and follow his policy, which from the writer's observation may be summed

up in the creed, "I know I don't know, therefore I will ask some one who does." When the farmer harvests his crops and is in possession of the proceeds he will be found in friendly consultation with his banker very soon after. A much closer relationship exists between country bankers and farmers than is the case with most other classes, and the result is beneficial to both. The action of one of these bankers towards his farmer-customer in a recent case that came to the writer's notice is typical: the farmer's attitude emphasizes the strange paradox that the man who is supposedly the least informed uses the shrewdest method of avoiding losses.

The Magazine of Wall Street was asked by a farmer whether it endorsed the selections of bonds in its "Bond Buyer's Guide," as upon asking his local banker for advice as to the investment of funds, the banker had merely picked up a copy of the magazine and showed his customer our bond list which appears in every second issue. Here was a case of super-caution, in making assurance three times sure: and the object lesson comes from a member of the class supposedly unsophisticated in handling money. It will be found upon investigation that farmers are foremost in thrift; and that the same care used in accumulating is generally applied in investing, either in good land or investment securities that give them an immediate return. Moreover the farmer buys and holds for "the long swing and the full bucket." Being an investor in the full sense of the word, he is never concerned with temporary depreciation in values, and rightly follows the principle that having carefully investigated before buying there is no reason for selling while returns and ultimate prospects are still good.

It may be that the solitary life, hard work at times, and long waits between seasons have disciplined the farmer so that patience is not only an inherent virtue, but also a habit. Without going too deeply into the causes, the habit is one of the best that can be acquired for success in investing, and that is perhaps the reason why the farmer is a great success as an investor.

It is to be doubted whether the farmer's philosophy towards investments could be improved upon by busy professional men and women in all ranks, and there is still less doubt that the inability to exercise patience, and the disinclination to investigate, is responsible for the large losses that seem to hit those following the more humanitarian professions like teaching and the ministry—the latter in particular. Those who follow these professions are inculcated by their very training with the belief that all mankind means well, that every man is their friend, and that statements should be accepted at their face value until the opposite is proven. A benign believing character, faith in their fellow-beings, and a disposition to trust the other fellow, are all splendid attributes when practiced in a *profession* that is essentially humanitarian. They are quite out of place, however, when it comes down to exchanging the fruits of years of labor for paper evidence of value

—or more often alleged value. No sentimental considerations should find a place in the business of investment, which is an ice-cold business proposition that has got to be proven—by the other man.

It is true that isolated cases arise of profitable speculations on the part of the least informed among these professional classes, but even a sulphur mine usually has a volcano underneath, and if one cares to take chances with latent volcanoes, it is about an even chance of success or destruction. There is but one route for the professional classes whose life work is elevating humanity, and who by instinct dislike disbelieving anyone. Like the farmer they should "play safe" and in their investments, at least, place the burden of proof on the seller.

The minister of religion in particular has exceptional opportunities of getting reliable advice since he comes in contact with the foremost citizens and is almost invariably on friendly terms with the leading bankers and business men of his community. Which minister does not number among his congregation a banker or two, and many shrewd business men? He should consult these people who will be sure to advise him carefully and conscientiously, or direct him to the best source of information. The professor and teacher is similarly situated towards his community, and unless he (or she) has made a particular study of the subject should seek out those among their acquaintances who have been most successful in business, to inquire how it has been done.

It is not out of place to say that a minister's actions investment-wise are likely to influence his congregants, and his situation can become embarrassing where least expected. The statement by an unscrupulous promoter that "the Reverend Mr. Doe has invested in our Fo-nee Oil Company" is often sufficient to loosen the purse-strings of the most cynical among the minister's friends and acquaintances; and if the Fo-nee Company should prove a loser, a good deal of moral blame can attach to the Reverend Mr. Doe's tacit approval as evidenced by his ownership of stock.

SINGLE-TRACK MINDS

The position of members of the dual professions of law and medicine is not appreciably superior, as is generally supposed, when it comes to a question of choosing their investments. One striking proof of their known "vulnerability" is the affection that is shown them by the gentry whose principal stock-in-trade is a batch of stock certificates, ready promises of affluence on nothing, and some equally intangible oil and mining prospects. The doctor and lawyer seem particularly in demand when the promoters' mailing lists are compiled, and in the latter case at least one would suppose that there would be hesitation in bearding the lion in his den.

The promoter is a good judge of human nature, and knows that the time of these professional men prior to their hanging out their shingle for themselves was fully taken up in the arduous study necessary to fit them for their life work. In the practice

of their profession they have had neither time nor inclination to study outside of their immediate objective, and in the majority of cases they are busy men who will not have time to check up on facts—or rather on the generalities which are presented in the guise of facts.

Their single-track minds has been an aid to success in their chosen career of specialists in a single direction. The doctor will find it very difficult to judge an investment without years of study. He would not prescribe for himself, and would pity the patient who attempted to doctor himself with patent medicines, home-made nostrums, or worse still, quack prescriptions.

Every lawyer knows that the client who is his own lawyer, and tries to legalize himself, has "a fool for a client."

In both cases, the lawyer and doctor have come into contact with those who have purchased "Medicine for the Masses" or "Law for the Layman" at so much down, and so much weekly. They know that these people would have been better off with their poor foundation for assimilating scientific knowledge, had they never met the book-salesmen.

The lawyer or doctor who buys his investment upon a somewhat similar plan, or who bites upon the bait in unsolicited "investment" literature that comes into his mails is more deserving of blame than the masses who do not possess his educational advantages.

Of the two, the lawyer is far more capable of receiving a mass of facts, analyzing them, and forming a conclusion, his training having been along those lines. In association with business men he usually outshines all others in the investment field, as a glance through a Directory of Directors proves. His mind and training give him a formidable advantage over most other professional men, perhaps not even excluding the banker. But—he is required to put in the extra training, and make up the deficiencies of a single-track mind by attribution with the broader-gauge minds of business men.

The professor and teacher is singularly adapted to the business of absorbing knowledge. His or her mind is arranged in orderly methodical lines which refuses to accept on faith that which is capable of being resolved into fact or reason. The recent return of President Wilson to these shores is a reminder that one professor at least has controlled the destinies of civilized nations. One does not know whether there is a marshal's baton in every soldier's knapsack, but it is believed that every professor and teacher is well qualified to learn the essentials of investment, and that there is no excuse for the enormous losses suffered by the members of these professions each year through faulty investment methods. The libraries which are so popular with these professors are well stocked with financial works and books of reference, and it is a simple matter to acquire a financial library of selected books that will lay the foundation for broader study. Their modest cost should be an inducement to buy, hold and study. Even if the whole subject is not fully mastered, the writer believes that

the knowledge gained will be found an invaluable investment that may repay itself in a manifold way, as a single good point well assimilated may prevent a mistake from becoming a disaster. The Book Department of The Magazine of Wall Street can be of great assistance in suggesting a course of study that will be found practical, at a cost within the reach of all.

THE EPILOGUE

The writer has not discovered any special immunity that the professions enjoy as compared with their less erudite brethren. In many cases their greater social prominence has made them larger targets for those who go after bigger game. While they are better qualified by their educational training to achieve better things towards material independence in their later years, many of them do not seem to have seized the opportunity of sharing in the industrial prosperity of a country that is perennially on the upgrade.

The field is boundless in its advantages, and if no spectacular awards await those who will take knowledge for the asking, they will by investigation and study be better qualified to guard that which they have gained, and know where and how to turn if the need should ever arise.—*Magazine of Wall Street*, July 19, 1919.

THE NARCOTIC ADDICT PROBLEM AND THE MEDICAL PROFESSION.

Narcotic addiction is among the vast, complex and depressing chapters of our national life. This affliction is without parallel in the depths of human miseries and misunderstandings.

Studying the history of drug addiction, physicians marvel that the subject has remained almost immune from research. Investigators in pathology, practice and therapeutics have devoted painstaking efforts towards the relief of almost every other mortal ailment, but the devotee of "dope" has been passed by, save for the near-Samaritanism of a comparatively few.

The narcotic drug situation in this country is rapidly approaching a crisis. It is a wound whose septic effects are spreading through our whole social system. Its importance can no longer be ignored and its handling and directions can no longer be left in the hands of non-medical men.

The Whitney New York State legislative investigation committee shows an enormous widespread use of narcotic drugs. Other findings of this committee include the existence of a widespread misunderstanding: a habit; a vice; a de-

pravity; undeserved exploitation of the suffering and of the needs of the afflicted individual by the illicit, illegal, underworld peddler and also by institutions, widely advertised, purporting to cure the condition. Also a widespread misunderstanding, or rather, an absence of all understanding of the state of mind, body and soul, hampering a drug habitue; also that based upon the theory of "a habit, a vice or a depravity," there are heaped upon these sufferers far too much humiliation and shame, disgrace, and tortures undeserved. It has shown conclusively that this state of narcotic drug addiction is one of the most distressive of the chronic physical ailments and diseases.

The use of the term "drug habitue" or "drug fiend," applied so generally to and accepted so commonly as descriptive of those handicapped by this condition is conclusive proof of widespread ignorance concerning the real nature of the drug curse, as well as a general scientific neglect of, and apathy and indifference towards it.

That the medical profession is still ignorant of the true psychology of a passion for drugs is evidenced by the fact that the average physician continues to refer these cases to the psychiatrist as mental defective, degenerates and results of vicious indulgence, and that jails and insane asylums are considered adequate institutions for their treatment. Is it any wonder that the charlatan profits, and that society passes a verdict of social outlawry upon them? Or that police officials persecute them? That legislators enact rabid laws, when the medical profession has failed to study or teach in its schools the known facts of this disease?

No type of individual furnishes the narcotic votary. He or she is simply the individual, of any type or class who in one way or another has contracted addiction disease.

Many, probably a majority of narcotic users are upright and responsible citizens. No age is exempt; people in every walk of life are afflicted with drug addiction. The infant newly born of an addicted mother (showing the physical symptomatology of body need for opiate at a few hours after birth), the judge on the bench, the minister in the pulpit, the doctor, the lawyer, the successful business man, the industrial worker, the defective and degenerate outcast of

society, all furnish examples of the plague. No class or social scale is left untouched.

Addiction disease exists in mentally, morally and physically normal individuals in all walks of life to a much greater extent than it does in the so-called underworld upon which attention and spectacular publicity have been so largely focused.

It is unfortunate that the attention of the public and the profession has been distracted by and focused upon spectacular manifestations and irresponsible actions exhibited by some of those who are in the chains of narcotics. In most of these cases the irresponsibility has antedated the habit or was simply a coincident result from environment and circumstances of life, and not characteristic manifestation of narcotic drug use.

Drug passion is not a cause of degeneracy or defectiveness. Irresponsibility, degeneracy, and deterioration are not essential or even characteristic attributes of this failing. The subnormal or abnormal who happen to have developed narcotic love, and the true criminal and underworld types who have acquired the drug habit, are not intrinsic to the disease, nor are they its characteristic sufferers. These defects are absent entirely in the great majority of addicts, of whom many are forced to conceal their afflictions because of popular conception of this condition and the lack of available, competent handling of it. This great majority occupies positions of highest responsibility, of great personal achievement, honor and respect. Some of our greatest and most respected men and women are unsuspected sufferers from the narcotic habit. It is their old man of the sea—and they, poor Sinbads, all forlorn. Constantly they are seeking relief, and praying for the day when enlightenment shall come, and that they will not be revealed as addicted, nor stigmatized as dope fiends and classed with criminals and degenerates to their social, personal and economic disgrace and detriment.

Addiction is not a vice or a habit. Neither are these worthy people psychiatric nor correctional cases nor problems. They are sick and deserving people. Addiction is as much a disease process as is scarlet fever, measles, diphtheria, pneumonia, or Bright's disease, and the sick addict is entitled to the same medical care

vouchsafed any other diseased or afflicted person, and any law which interferes with, or tends to deprive them in any way of medical help and treatment should be strenuously opposed.

Twenty or more years ago, Jennings, of Paris, advanced the theory that drug addiction is a diseased process. Contemporaneously Dr. Petty, of Memphis, Tennessee, announced a similar conclusion. In 1913 Dr. Ernest S. Bishop, of New York, as the result of clinical observation in Bellevue Hospital, enunciated a principle of the mechanism of the production of this condition. Laboratory experiments on animals reveal that any red-blooded animal may be made an addict, proving the correctness of the theory of the mechanism of production of addiction as enunciated by Dr. Bishop.

Dr. Bishop showed that the continued administration of narcotic opiates starts a protective mechanism against the toxic effects of the opiate set in motion within the body. That as a result of the operation of this mechanism certain protective or antidotal substances, antibodies or antitoxins are formed and float in the blood; that these protective substances are themselves toxic when circulating in the blood stream, and that these free, uncombined antidotal substances are the cause of all the physical manifestations of suffering and distress that characterized the withdrawal of the drug.

Conclusively corroborative of the disease entity described by Dr. Bishop in 1913 is the laboratory experiment of Dr. Valenti, of Rome, and Dr. Hirschlaff.

Very briefly, Valenti in 1914, developed narcotic addiction-disease in dogs, after a period of gradually increased morphin administration. He then ceased the administration of the drug to them completely, throwing the animals into the severe physical manifestations characteristic of drug withdrawal.

Blood serum taken from these animals in the withdrawal state, produced, when injected into normal dogs, the same symptoms shown by the addicted dogs upon withdrawal of their opiate. Furthermore, the violence of these symptoms in the normal dogs was directly proportionate to the dosage of morphin to which the addicted dogs had been accustomed.

He concludes that the signs and symptoms of withdrawal, or morphin need, are not due to

the absence of the drug, but are due to a new substance originating within the body and circulating in the blood, which substance is toxic to the animals, when not offset by the accustomed dose of morphin.

The details of this work are available in the *Archives for Experimental Pathology and Pharmacology* of 1914.

Hirschlaff secured from morphin addicted rabbits during the withdrawal period, a serum which, when injected into normal rabbits, enabled them to withstand fatal doses of morphin. He repeated these experiments with mice, which animals are very susceptible to morphin. The results seemed to show unmistakably a protective influence to be at work in the body of these addicted animals.

So far as has been experimentally ascertained, no red-blooded animals escape the physical manifestation and characteristic reaction and phenomena of addiction disease after sufficiently prolonged administration of opiate drugs.

Clinical experience, as well as animal experimentation and laboratory findings, shows the presence of a physical mechanism in the development and production of some substance circulating in the blood and causing the symptoms and physical signs and phenomena of addiction disease. These findings must now be accepted as the scientific and best explanation of the condition. It is indicated by every clinical manifestation.

The worst phase of the narcotic situation in the past few years, and especially since the enforcement of the restricted legislation without provision for education and adequate treatment, is the rapid increase and spread of criminal and underworld illicit traffic in narcotic drugs. This exists because conditions have been created which make smuggling and illicit traffic tremendously profitable.

Drug addiction is a health and not a police problem. Police regulation, raids of honest and dishonest addicts, sentencing to jail and workhouse, will not relieve the situation. The man coming out of a so-called cure is horribly weak and suffering; his body needs drugs for immediate relief, and his main idea is to get his drug content immediately. This he usually does, and from the criminal vendor and peddler, and until the Revenue Department, as well as the

medical profession, awakes to its actual responsibility in this matter the illicit traffic will continue to increase.

The needs for the treatment of addiction are further scientific research that we may have a better public understanding of the disease. The solution of the drug addict problem does not lie in the restriction and hampering of the physician and druggist in the legitimate discharge of the duties of the sick.

The doctor plays a very small part in the causation of drug addiction. Go to the place where the City of New York distributes drugs gratis to the dope fiend, watch carefully as they slink and shamble into the little building and come out with quick, light steps—note the great number of boys—boys broken before they are built. It is this class of youthful addicts that has so alarmingly increased since the enforcement of the various narcotic laws.

Dr. Campbell, physician of the Harlem prison, says: "Physicians and pharmacists are not at all involved in the narcotic drug evil; that few of the young men suffering from the drug habit that came through the Harlem prison had ever been seen by a physician, and that it is absurd to bring the doctor and the druggist into the matter at all."

He states further that the illegitimate user of the drug have sources of supply outside the medical profession and the pharmacists. Dr. Campbell invited the Whitney Legislative Committee to inspect the Harlem prison and see with their own eyes the condition of the habitués who were confined there. The assertion of Dr. Campbell is corroborated by the statistics furnished by the district attorney of the County of New York, who has said that less than ten per cent of the offenders against the narcotic drug law were either doctors or druggists.

The evidence wherever taken corroborates the experience in New York, the real cause being known to the authorities. It is the duty of the officials to ascertain the source of supply and the channels of distribution of the drug in the underworld and to close them. This can be done without further hampering the medical profession by imposing further restrictions on the legitimate practice of medicine and pharmacy in the handling of narcotic drugs.

An alarming situation regarding the care of

the opiate victim has been created in New York, and physicians and druggists are almost unanimously deciding that under present conditions of administrative uncertainty they will have nothing to do with opiates or with those addicted to them.

Something is radically wrong when after five years of supervision under the Harrison Law there is noted from all quarters of the United States a great increase in underworld traffic and peddling, and when honest practitioners of medicine are afraid to attend to legitimate needs of deserving sick people.

A. R. Parkhurst, Director of Bureau Narcotic Research, New York, says: "These facts are brought vividly to my attention by the scores of physicians, druggists and addicts who daily visit the office of this bureau."

Why do the kind-hearted, humane doctors withhold help and cooperation from sick addicts? The Whitney New York Legislative Committee gives the answer in part when it says: "First, lack of understanding of the nature of drug addictions has characterized the attitude of the medical men towards the addict. Second, that the average medical man has been taught to think of the addict not as a sick person but as a degenerate. Third, the failure of our medical organization in giving support and help to uphold the rights of the individual physician under the laws. Fourth, that the administration of the laws has been left to the officials of criminal jurisdiction, namely, the police and judiciary, who have no knowledge of training in the science and humanities of medicine, and who can and do see only the criminal aspect of the question.

The committee found that the medical practitioner is afraid to treat addicts, or to have anything to do with them; that the honest physician desirous of helping this class of sufferers has to continue in jeopardy of his personal liberty if he wishes to help the sick addict, or else refuse to have anything to do with him, because if arrested under a police interpretation of the law, he knows he can get no help or advice from the organized medical societies where he should expect to be able to look for advice and guidance and help in the honest pursuit of his profession.

While laws have been placed upon the statute

books which under a humane interpretation would be construed as giving physicians power to treat addicts under the same privileges that he would treat any other man or woman, yet what was found? Our police and legal governmental machinery out baiting to ensnare the doctors, using decoys in the guise of addicts appealing to the humanitarian side of the physician and getting him to prescribe narcotics a few times in succession, and then arresting the doctor. This, frequently, at a late hour, and the taking of a perfectly ethical physician to the police station, keeping him over night locked up in a cell with criminals, not allowing him to communicate with his family or friends, in order that he might obtain bail. This has happened in Chicago as well as in other places in the United States. Is it any wonder that the profession fail to cooperate in the handling of the addict sick?

The evidence before the Whitney Committee shows that because of fear on the part of physicians the addicts are driven in vast number to the underworld and to other illicit sources for the only medication which will give them relief from their suffering, solely because there is no other place to go.

The law purports to demand good faith only in the course of professional practice in the handling of a narcotic devotee. If the wording of the law were followed by government officials, if there had not been shown a disposition on the part of the Revenue Department to interpret treatment from the viewpoint of the lay mind, and if the Department of Justice could disabuse the minds of the profession of fear in treating narcotic addicts, our government would soon have the cooperation of the profession, and these unfortunate sick would go back to the medical man for counsel and treatment. In this way they may be made self-supporting, honorable members of society, instead of hunted outcasts driven to shysters and charlatans and criminal exploiters for such relief as will enable them to earn a livelihood.

When the government sees fit to undo the wrong done the medical profession, and establishes itself in the confidence of the doctors, it will have made a great stride forward in solving the drug (addict) problem. Confidence in the good intentions of the government officials must

be established so that when consulted by an addict the doctor can feel free to diagnose, prescribe or give advice or opiate medication to the best of his skill and ability, just as the physician gives any other medication which a patient's condition seems to demand, meeting the therapeutic indications of the case whether it is addiction or otherwise; treating his addiction as a physical ailment along scientific lines, honestly, humanely, and without fear of having his motives and the character of treatment questioned by laymen and the fear of having to spend the night in a police station for doing his honest duty towards the sick.

In contrast to the humane, scientific method of care for addiction disease, based on the findings of animal and laboratory experimentation, it is to be noted that at the present time the health executive of our largest city has put himself on record as in favor of a system of enforced central registration and photographic and fingerprint records of all narcotic addiction disease victims, as a result of agitation for this unscientific method of care for these unfortunates.

New York has enacted a law which requires all drug addicts to register, be numbered, and photographed, and to obtain a dosage card before they can have any drug prescribed for them.

According to A. R. Parkhurst, Director of Bureau of Narcotic Research, New York, a very small proportion of the sufferers from this disease have complied with the recent regulations requiring their registration, numbering, photographing, personal identification, giving of employers's name, etc., at the Board of Health, carrying with this as it does considerable power to the Board of Health to decide and determine on the duration of their treatment, and potential, if not actual, power over the clinical and therapeutic efforts of the practitioner of medicine. It is placing the sick man in a Rogues' Gallery.

To those familiar with addiction disease and its sufferers, it must be apparent that such registration would not be regarded with entire confidence by persons having social, personal and economic interests to protect. The dangers of blackmail and exposure, and the certainty of very humiliating experience would tend to keep from such registration all decent persons who could possibly avoid it.

In view of our present knowledge of drug slavery, the application of even a modicum of common-sense would show the absurdity, to say nothing of the inhumanity, of handling the sick in this way; of recommending a finger-print system and other means used for identifying criminals to be applied when drugs are prescribed for sick addicts.

Certainly, this is an autocratic and arbitrary assumption of power in treating the sick which should not be given to any layman or public health agency, or to any organization, medical or otherwise, in the treatment of the addict, who should be treated as a sick person, and not as a criminal.

The spectacular and unscientific way of handling drug users now in vogue in New York is foredoomed to failure because there is no medical panacea or cure-all treatment for addiction. There is no schedule of treatment or no line of approach and procedure which can be applied to all cases. Generalization in the treatment of addicts is harmful. The spectacular publicity attending more or less routine and so-called specific treatment will distract from an already aborted progress; to date it has done more damage to progress and to an understanding and treatment of addiction than anything else.

The same is true of panaceas other than medical, such as criminal identification systems, institutional commitment, etc. No legislative or administrative panacea or special rule can be applied to all cases of a definite diseased condition presenting such varied and various aspects and phases, and which so greatly and mysteriously distorts body functions and organs as does drug addiction.

Since there is no panacea or definite positive cure for addiction, why should the state demand that the addict be deprived of his necessary drug and declare and treat him as a criminal because he cannot cure himself?

Why should he be driven from pillar to post, humiliated, disgraced, ostracized, even beaten unmercifully by the police officers when an opiate victim should be cared for the same as is any other sick person?

Until some method of treatment is discovered that will offer hope of cure in the great majority of cases of opiate victims, the only alternative

at the present time is that the drug serf shall continue the only kind of medication that will relieve his sufferings, and restore him to usefulness and self-support and keep him from being a burden to the community. This can be done only by administering to him his drug of addiction in accordance with his physical need until proper facilities are provided for positive removal of this drug need.

MILK WAGE VS. PHYSIC.

Last month we touched upon the after-the-war program of the Red Cross. This issue we publish the after-the-war program of the Public Health Service. The programs of the two organizations indicate a complete duplication of each other's work and purpose.

With all this philanthropy in sight and more to come we wonder where the doctor is to get off, with everything free to the dear public but salvation, food and clothing it would seem as if there is no further need of physicians.

It has been authoritatively stated that the average annual income of the physicians of the United States in seven hundred and fifty dollars, let us be liberal and say it is twice seven fifty or fifteen hundred. In commenting upon this we would like to ask what is the use of equipping oneself in order to follow a profession where the income derived from following the same is materially less than the day labor wages of non-skilled workmen.

May we suggest that before the doctors are put out of business as the result of decreasing income due to socializing influence at work at the present time, that they give up dispensing physic and come to Chicago and peddle milk. The guaranteed wage is thirty-five dollars a week or eighteen hundred and twenty dollars a year with commissions running this wage up to sixty or sixty-five dollars a week or thirty-three hundred dollars per annum. No education and little brains required; no pre-medical and medical education to slave for. No preliminary outlay or expenditure of ten thousand dollars for an education, to say nothing of the loss of the money (\$1,800 to \$3,000 per year) that could be earned between grammar school graduation [at thirteen or fourteen] and twenty-eight years of age, the minimum age when a boy can be equipped to practice medicine.

No libraries to equip and keep up. All that is necessary is sufficient intelligence to steer old Dobbin right and left through streets and alleys and sufficient ability to carry a bottle from wagon to door step. It is not even essential to have a sufficient education to be able to distinguish pints from quarts in the charge book.

AFTER-THE-WAR PROGRAM OF THE PUBLIC HEALTH SERVICE

From Supplement No. 35

Public Health Reports, May 9, 1919.

This program meets urgent national needs by outlining health activities which are practicable and which will yield the maximum result in protecting national health and diminish the annual toll of thousands of lives taken by preventable diseases and insanitary conditions. The success of this program will depend on the active cooperation of Federal, State, and local health authorities. Experience has shown that this cooperation can best be secured on the Federal aid extension principle.

1. *Industrial hygiene:*

(a) Continuing and extending health surveys in industry with a view to determining precisely the nature of the health hazards and the measures needed to correct them.

(b) Securing adequate reports of the prevalence of disease among employees and the sanitary conditions in industrial establishments and communities.

(c) National development of adequate systems of medical and surgical supervision of employees in places of employment.

(d) Establishment by the Public Health Service, in co-operation with the Department of Labor, of minimum standards of industrial hygiene and the prevention of occupational diseases.

(e) Improvement of the sanitation of industrial communities by officers of the Public Health Service, and cooperation with State and local health authorities and other agencies.

(f) Medical and sanitary supervision by the Public Health Service of civil industrial establishments owned or operated by the Federal Government.

2. *Rural hygiene:*

(a) Federal aid extension for establishment and maintenance of adequate county health organizations in counties in which the county and State governments, separately or together, will bear at least one-half (usually two-thirds) of the expense for reasonably intensive rural health work; county health officer to be given status in national health organization by appointment as field agent of the Public Health Service at nominal salary; sanitary inspectors and health nurses also to be given official status in the Public Health Service.

(b) Detail of specially trained officers of the Public Health Service to formulate and carry out, in cooperation with local authorities, intensive cam-

paigns for the sanitation of groups of rural towns, the work to be directed especially toward securing safe water supplies, cleanly disposal of human excreta, pasteurization of milk supplies, and bedside control of cases of communicable disease.

(c) Studies by a special board of service officers to determine improved methods of rural sanitation, the studies to be confined to the most practical and essential phases of the subject.

(d) Widespread dissemination of the simple rules for rural sanitation through various government and civil agencies, such as the bureaus and divisions of the Department of Agriculture, the Farm Loan Board, agricultural colleges, public school boards, farmers' associations, and women's clubs.

3. *Prevention of the diseases of infancy and childhood:*

(a) Through cooperation with the Children's Bureau, the American Red Cross, and other recognized agencies in promoting measures for child and maternal welfare.

(b) Through prenatal care by promoting—

(1) The adoption of measures for the adequate care and instruction of expectant mothers through visiting nurses, prenatal clinics, lying-in facilities, attention during confinement, and regulation of the practice of midwifery under medical supervision.

(2) Safeguarding of expectant mothers engaged in industries.

(c) Through infant-welfare work, by promoting—

(1) Accurate registration of all births, and measures for adequate care of babies in homes, welfare stations, and day nurseries.

(2) Instruction of mothers by visiting nurses. The enforcement of prophylactic measures to prevent blindness in the newborn.

(3) Safeguarding of milk supplies and establishment of pasteurization plants.

(d) Through supervision of children of preschool age by promoting—

(1) The organization of divisions of child hygiene in State and local health departments.

(2) Instruction by visiting nurses in general, personal, and home hygiene, and inspection for physical defects and the control of communicable diseases.

(3) The establishment of clinics for sick children.

(e) Through supervision of children attending school by promoting—

(1) The supervision of the home and school environment, including sanitation of school grounds and school buildings.

(2) The maintenance of health supervision of school children by school nurses and school physicians to detect and correct physical and mental defects and to control communicable diseases.

(3) Mental examinations of school children to determine and prescribe suitable treatment and training for children who fail in class work.

4. *Water supplies.*—National development of safe water supplies—

(a) By extending surveys already made by the Public Health Service of water supplies, checked by laboratory analyses when necessary, to be done by national, State, local, or university personnel and laboratories.

(b) Introduction and extension of methods of water purification according to results of surveys and analyses.

(c) Stimulation of communities to obtain safe water through national, State, and local representatives and volunteer organizations.

5. *Milk supplies*.—National development of safe milk supplies through—

(a) Universal pasteurization (including adequate municipal supervision).

(b) Adequate inspection of production and distribution of milk and milk products.

(c) Stimulation of communities to obtain safe milk through national, State, and local representatives and volunteer organizations.

6. *Sewage disposal*.—Proper sewage disposal will control intestinal diseases, such as typhoid fever, dysentery, diarrhea, and hookworm. These diseases now cause over 60,000 deaths annually. National development of safe methods through—

(a) Extension of water carriage sewerage systems wherever practicable.

(b) Elimination within municipal limits of cesspools and privies.

(c) In rural communities the installation of sanitary privies.

(d) The establishment of minimum standards of permissible pollution of streams, lakes, and rivers used for water supplies.

(e) Stimulation of communities through national, State, and local representatives and volunteer organizations, to obtain safe sewage disposal.

7. *Malaria*.—National development of measures for the control of malaria and malaria-bearing mosquitoes in industrially, agriculturally, and economically important areas of the United States—

(a) By the further dissemination of the knowledge of methods for its control (elimination of malaria-mosquito breeding places through drainage, oiling, ditching, and the like) now being demonstrated by the Public Health Service.

(b) By the extension throughout the country of surveys of certain areas as to the prevention of malaria and malaria-bearing mosquitoes.

(c) By increasing the corps of experts of the Public Health Service engaged in malaria prevention and by the utilization of other national agencies wherever practicable to advise the communities as to the methods for best handling their problems in malaria.

(d) Additional appropriations for the reclamation of large areas from malaria through proper drainage. Funds for such projects should be supplied on a 50-50 basis by Federal and State Governments. This plan is

especially applicable to the control of malaria in communities where malaria conditions interfere with their economic development.

8. *Venereal diseases*:

(a) Medical measures:

(1) Establishment of clinics, dispensaries, and hospitals.

(2) Epidemiologic studies.

(3) Free diagnosis.

(4) Examination for release as noninfective.

(5) Free distribution of arsphenamine.

(6) Control of carriers through detention and commitment.

(b) Educational measures:

(1) Proper reporting of cases.

(2) Standardization of pamphlets, exhibits, placards, and lectures.

(3) Cooperation with national, State, and local authorities and volunteer associations.

(4) Cooperative work in industrial plants, shipyards, and railway employees' organizations.

(5) Cooperation with druggists' organizations to secure their voluntary aid in the control of patent nostrums for the treatment of venereal diseases.

9. *Tuberculosis*:

(a) Stringent provisions for the proper reporting of cases of tuberculosis.

(b) Adequate instructions of families and patients, especially in families where there is an advanced case.

(c) Hospitalization of cases, wherever practicable, either through city institutions or by arrangements with State or district tuberculosis hospitals.

(d) Cooperation with national societies and agencies having for their object the prevention of tuberculosis or the improvement of economic conditions.

(e) Improvement of industrial conditions predisposing to tuberculosis, such as "dusty occupations."

10. *Railway sanitation*:

(a) Consolidation under supervision of the Public Health Service of railway sanitation.

(b) Protection of railway employees by adequate health measures (e. g., protection against smallpox and typhoid fever by vaccination and inoculation; supervision of food, water, and milk supplies consumed by employees; elimination of hazards in shops and other work places; supervision of sanitary housing facilities; sanitation of railway communities).

(c) Protection of the public by—

(1) Sanitary supervision of water, milk, and food supplies furnished by railway administration.

(2) Sanitary supervision of employees engaged in handling water and food supplies so furnished.

(3) Sanitation of stations, terminals, rights of way, with special reference to sewage disposal, malaria-mosquito eradication, and screening against disease-bearing insects.

(4) Prevention of the spread of communicable diseases through common carriers.

(5) Improvement and demonstration of the principle of employing full-time health officers by all municipalities.

11. *Municipal sanitation:*

(a) Development and demonstration of the principle of employing full-time health officers by all municipalities.

(b) Enactment and enforcement of ordinances for adequate disease reporting.

(c) Provisions for safe water, food, and milk supplies and sewage disposal.

(d) Enactment and enforcement of special regulations for the improvement of conditions causing tuberculosis.

(e) Establishment of community health centers.

(f) Municipal campaign for the control of venereal diseases through venereal-disease reporting; clinics for the treatment and control of carriers and free treatment for all cases.

(g) Control of malaria and malaria-bearing mosquitoes in malarious regions.

(h) Enactment of proper building ordinances and provision for sanitary supervision of housing, especially in industrial centers, including improvements in transportation, so as to permit redistribution of persons living in overcrowded communities.

(i) Adequate systems of medical supervision of schools.

(j) Reduction of infant mortality by proper provision for prenatal care, bed space in maternity hospitals, infant-welfare stations, visiting nurses, and milk and ice stations.

(k) Stimulation of municipalities to realize their own responsibilities for health, and the part played by adequate health protection in the happiness and material prosperity of the community.

12. *Health standards:*

(a) Communicable diseases. Promulgation by the Public Health Service of minimum standards for the control of communicable diseases.

[NOTE.—The service has published on this subject a report of committee of the American Public Health Association, on which the service was represented. This report should be reviewed and amended by a board of service officers. It should then be formally approved by the conference of State and Territorial health officers with the Public Health Service, and be promulgated by the Public Health Service as Federal standards.]

(b) Industrial hygiene. Standards of industrial hygiene and of sanitation of places of employment should be prepared by the service in cooperation with the Department of Labor.

(c) Sewage and excreta disposal. Minimum standards should be promulgated on the following: (1) Water-carriage sewerage systems; (2) sanitary privies.

(d) Standard specifications for safe water and water purification.

(e) Community sanitation. Preparation of standard methods for scoring the sanitary condition of communities.

(f) Preparation of additional standards for the manufacture and the purity and potency of biologic products and for arsphenamine.

(g) Preparation of standards for illuminating, heating, and ventilating public buildings and schools.

13. *Health education.*—To increase the knowledge of the general public on means relating to disease prevention and personal hygiene—

(a) By the employment of medical sanitarians, having special experience in educational methods and their use, in cooperation with Red Cross National and State organizations, State and municipal health department, State industrial commissions, and State and national health associations.

[NOTE.—The prevention of the following conditions and diseases will be the special objects of health education: Excessive infant mortality, occupational diseases (see section on industrial hygiene), malaria, typhoid fever, hook-worm, venereal diseases, pellagra, tuberculosis, pneumonia, cerebrospinal meningitis, and personal hygiene.]

(b) By advocating and assisting in the securing of full-time State, district, and local health officers.

(c) By stimulation of States and municipalities to the acceptance of their full responsibility for public-health conditions and the support of health activities by adequate appropriations.

(d) By the detail of service officers to State health organizations, and when necessary, to city organizations, particularly in communities presenting special health problems.

14. *Collecting of morbidity reports.*—Extension of disease reporting to be accomplished through the collection of adequate reports of disease prevalence:

(a) By the extension of the present system of collaborating epidemiologists.

(b) For the industrial group of the population, through the appointment of industrial surgeons and record clerks in various industrial establishments, such industrial surgeons to be appointed by the Public Health Service, at a nominal salary, so as to place them under the direction and control of the service, and the remainder of the salary to be paid by the industrial establishments to which they are attached. In addition to reporting disease, these surgeons will act as medical and surgical officers and sanitarians. They will also report on community sanitation.

15. *Organization and training for duty in emergency of the reserve of the Public Health Service*—

(a) By the establishment of training schools in public-health work in connection with stations of the Public Health Service and leading universities at which members of the reserve may receive intensive training for short periods at stated intervals.

(b) Ordering members of the reserve to active duty to participate in important field work of the Public Health Service.

ILLEGAL ASSUMPTION OF POWER BY HEALTH BOARD AND THE NARCOTIC ADDICT—A MUCH-DESERVED CRITICISM

MEDICAL MEN TAKE NOTICE

A. R. PARKHURST

Director of Narcotic Research

47 W. 40TH ST., NEW YORK

THE CAMPAIGN AGAINST NARCOTIC ADDICTION

To the Editor of the Medical Record:

Sir: An alarming situation regarding the case of the drug addict has been created in this city, and physicians and druggists are almost unanimously deciding that under present conditions of administrative uncertainty they will not have anything to do with opiates or with those addicted to them. A very small proportion of the sufferers from this disease have complied with the recent regulations requiring their registration, numbering, photographing, personal identification, giving of employer's name, etc., at the Board of Health, carrying with this, as it does, considerable power to the Board of Health to decide and determine on the duration of their treatment, and potential if not actual power over the clinical and therapeutic efforts of the practitioner of medicine. To those familiar with addiction-disease and its sufferers, it must be apparent that such registration would not be regarded with entire confidence by persons having social, personal, and economic interests to protect. The dangers of blackmail and exposure, and the certainty of a very humiliating experience, would tend to keep from such registration all decent persons who could possibly avoid it.

It was stated at a recent hearing in the Board of Estimate that such measures as had been enforced by the Department of Health lay entirely without its proper function and probably without its legal rights and duties. However, this may be, it is to be deplored that the Board of Health did not give sufficient attention to the scientific aspects of this disease before promulgating its very stringent regulations, and did not at an early date attempt to secure the co-operation of the medical profession in the handling of this disease, for a campaign of public health education along non-spectacular lines is certainly, and has always been, one of the greatest needs of

the addiction situation. Certainly, if these things are beyond the legal activities of the Board of Health, as was suggested at a meeting of the Board of Estimate, and as is believed by many, the powers of the Board or their absence should have been determined before an attempt was made to apply them to physicians and sick people.

Something is radically wrong when the newspapers report a great increase in underworld traffic and peddling, and when honest practitioners of medicine are afraid to attend to the legitimate needs of deserving sick people. These facts are brought vividly to my attention by the scores of physicians, druggists, and addicts who daily visit the offices of this bureau. The immediate need is for physicians to make the best of the situation until the situation can be cleared and defined, and the medical organizations can be brought to a practical activity in the guidance and protection of their honest members. Practitioners and druggists should not abandon suffering humanity to the criminal underworld traffickers in narcotics.

Blame is placed by many for part of the panic upon the action of the Federal Department of Internal Revenue in their recent arrests and their new regulations. Nothing as to the practical interpretation and administration of these new regulations has yet been announced by the Revenue Department, which is urging all honest practitioners to care for the addicted sick. Certainly physicians should look to this department so to interpret and administer these regulations, and provide proper exemptions, that the clinical and intelligent handling of worthy addiction sufferers by honest practitioners of medicine will not be made impossible.

The immediate literal compliance with these Federal Regulations will work present hardships and temporary injustice, but like the old regulation demanding routine reduction of dose irrespective of the clinical needs of the case, they will undoubtedly be liberally interpreted and intelligently enforced so as to work no hardship to the honest and worthy and give latitude to the intelligent treatment of the disease.

Whatever may be the outcome of the present situation, physicians and druggists should not abandon the suffering sick, realizing that opiate addiction is, in its withdrawal symptomatology,

one of the most agonizing of all chronic physical ailments.

The most urgently required activity from our Boards of Health and medical educational organizations is the spreading of some practical and possibly applicable clinical information as to the handling of this disease.—*Medical Record, August 2, 1919.*

HORRIBLE FATE OF THE CHILDREN OF LILLE

The Paris letter, *Medical Record*, March, 1919: No one can read without pity, nor, to use President Wilson's Words, "without horror and a burning heart," the petition of the mothers of Lille imploring the French government to demand of Germany the instant return of their children whom the Huns have carried off into captivity. The list of those taken from Lille alone comprises 4,068 names. Thirteen are children of fourteen years of age, 1,100 are fifteen, 1,147 are sixteen, and 1,499 are seventeen. We beg "the Government of the Republic," says the petition, "to summon the German government to restore to their mothers the children who have been carried off and are retained in contempt of the law of nations. We are tortured by the thought that they are dragged along with the barbarous hordes fleeing in disorder, that they are at the mercy of heartless and pitiless men, and that, enfeebled by four years of unheard-of privations, they are exposed to all the dangers and sufferings of a routed army."

At the present moment when Germany, to escape the punishment of her crimes, is pretending to reform her governmental system, it is well that this pathetically terrible indictment be given the fullest publicity. The system certainly was monstrous and in need of reform. But what about the people? The system was the product of the nation; it faithfully reflected the nature of the most abject savages that ever disgraced the human race, arrogant and merciless in victory, groveling and treacherous in defeat. The efforts that have been made and are being made to distinguish between the Huns and their masters, to whitewash the people and incriminate only the "ruling caste," fill one with pity for the naivete or contempt for the duplicity of those making the efforts. This war

is the war of the German people. It is repudiated by the people now only because the Germans' treacherous and bloody aggression on civilization has failed. Did the German people protest in 1914? Gloating over the prospect of booty, of war indemnities, trade privileges and territorial acquisitions, the German people, like one man, hailed with joy the opening of the long promised and impatiently awaited "fresh and frolicsome war," and rushed to participate in it and the pillage.

Four times in a century the German hordes have deliberately drenched Europe with blood. Four times in a century they have poured into France, murdering, burning, plundering; the entire race, officer and private, shopkeeper and laborer, professor and peasant, welded into a solid block by lust and envy and avarice. Read the indignant protestation sent by Lille scientists, Drs. Calmette, Parenty, Witz, and others, to the Academy of Science, and read at the meeting of that eminent body last Monday. Some purblind or callous pacifists urge that the people is not responsible for the crimes of its leaders. But, protest the signers of the protestation, those who have witnessed, as we have, the readiness and zeal displayed by all the troops, young and old, in the execution of their orders, must feel convinced of their complicity.

Proof of that, if further proof were needed, would be found in the hideous crimes which have called forth the pitiful petition from Lille, a petition signed by 5,000 mothers robbed of their children. For the nation guilty of such bestiality can any punishment be too severe? Can any conditions to prevent further German barbarity be sufficiently rigorous? It is not the Kaiser and the "ruling caste" alone that must be shackled; it is the entire horde that must be rendered powerless for evil in the future. Any weakness in dealing with the enemy of mankind, the German people in its entirety, would be fatal. M. Clemenceau's powerful declaration is dictated by a spirit of strict justice and by a sense of duty to humanity: "The most terrible account has been opened between people and people. It shall be paid."

The Berliner Tageblatt now demands an official investigation of the charges laid at the door of the German Army and its chiefs. But nothing was said so long as the fortune of war

seemed to be favoring the criminal nation; no one, from prince to peasant, condemned the nameless horrors committed in France and Belgium—the ruining of entire provinces, the razing of towns, the driving forth of hapless citizens, the torture and maltreatment of women and girls, the deliberate destruction of hospitals, and murder of wounded, the creating of awful deserts where once were fertile fields and orchards. For all this hideous work of bestial ferocity the German nation has a direct and crushing responsibility.—*Medical Record, March, 1919.*

THE LAST STAGE OF THE DOCTOR WILL BE WORSE THAN THE FIRST

COMMUNIZING THE MEDICAL PROFESSION

Not long ago Dr. Vincent, who is president of the Rockefeller Research Bureau, in somewhat of detail outlined as he sees it coming, the new relationship that the practice of medicine and surgery is to bear towards civic and sociologic life in this country.

As Dr. Vincent sees it, medicine, in its broad sense, is to be simply one of the co-operating bureaus of government. He sees the members of the profession as having lost all personal initiative, and he sees physicians and surgeons merely working a specified number of hours in a day, at a governmentally fixed price. He sees the physician having absolutely nothing to say as to whom he will attend, and also sees the patient having absolutely no choice as to what physician shall treat his troubles.

Dr. Vincent has not in so many words carried his logic that far, but all this, so far spoken of, is the next inevitable step to what he advises physicians to prepare for. And it staggers one's mind, when one stops and tries to figure out what it all means, when a most learned man calmly proceeds to map out what really seems likely to be in store for medicine, in the immediate future! As unjust, and as unworthy, and as retrogressive as it all is, medical men know that the calamity has come upon us, through the workings of evolutionary law. Some place the seed of this thing has been sown, and has been allowed to develop.

Medical men always reason from within outwards, so to speak. From this sociologic calamitous condition of things, the mind of the

medical man travels out in all directions, hunting for its germ. There are two principal conditions, either of which may have been the cause of the sociologic disease. (a) As has been pointed out, it may have been at first a little insignificant pernicious idea. (b) The disease may be the reaction to the dominance of some great wrong?

The medical profession must wake up to the fact that if this thing has grown out of some neglected duty in the past, the only way out of it is to now take up that duty. From a study of the intellectual standards of those backing the immorality, it would seem that the duty neglected in the past, may have been nothing more than the neglected wholesome education of these people when they were boys and girls. For some unaccountable reason, physicians almost universally feel that matters of public interest—particularly political matters, are contentious affairs, into which physicians have no right to enter; and the result is, that the medical profession is obliged to take what may be left after the scramble is over. And now, looking at the matter from the view-point of past neglected duty of this kind, one gets the impression that something is about to be handed out, because to the mind of the mob, the medical profession is easy.

The present socialistic craze, like all other evil things, is buoyed up the hope of getting something for nothing. Some one has something that the degeneracy instinct of socialism wants to get hold of—wants to get hold of it by a short cut. Above all things it does not want to work for it, and save for it, and sacrifice for it. It is perfectly willing to terrorize, and confiscate property, and seeks to bring industry and frugality down to the immoral level of the mob. Socialism is reversion to type.

Now, business enterprises may have in them all of the destructive elements of socialism. And, too, such business enterprises may be mighty successful in amassing wealth. But all the time that those enterprises are at work getting that wealth together, minds outside of the business corporations are more and more reacting to the injustices, and sooner or later there will be another injustice which will be destructive in opposite directions; and this injustice will check or destroy the so-called business enterprises.

This is biologic law. It is evolution's way of doing. That is to say, injustices of the business enterprises, would themselves eventually wreck mankind, and evolution to save mankind reacts to the production of outrageous ideas which by their very awfulness, call attention to the evil that has been permitted to masquerade under the cover of legitimate business. Evil always parades itself as being something beneficent, and evolution leaves it with man to be fooled by evil, or pretend to be fooled, just as man elects in the matter. As has at other times been laid down in these columns, evolution always squares accounts with civilization in just this way. It is a curious feature of intellectuality, that the mind of man is not likely to be much interested with mental abnormality, until after the abnormality has reached big proportions. The communistic idea that seems almost sure to submerge the medical profession has not grown up in a day. It is a sociologic plague sure enough, but it has some biologic design, nevertheless.

Of course in the present chaotic condition of world's affairs, one needn't waste time in wondering over actualities, or in wondering over possibilities. The world as a whole is topsy turvy, and this part of the world is as topsy, as any other part of it. Just what the present mental condition of the world really means, one hardly dares hazard a guess; but the communistic idea is so dominant in this country that its study and sane solution is vital to the life of the medical profession, and hence vital to the life of the nation.—*Charlotte Medical Journal*.

KEEP UP WAR RISK INSURANCE

Among the last official acts of Mr. McAdoo as Secretary of the Treasury was the issuing of a circular urging the soldiers and sailors of America to continue their payments to the Government Insurance. The exhortation is timely because with a change from martial to civil life many of those who when receiving their discharges will be careless and permit their insurance to lapse for lack of payment, only to find afterward that they have lost their right to participate in this insurance and will not be able to regain it. As "it is the strongest, safest and cheapest life insurance ever written," it is the

part of prudence to continue the payments so that the insured can avail themselves of the new policies which it is purposed to issue in exchange for those of the present issue. The new policies are planned to give the holder the choice of Ordinary Life Insurance, Twenty Payment Life, Endowment maturing at the age of 62, and other usual forms of insurance.

We have already in these pages urged the necessity of keeping up the payments upon the Government Insurance, but its imminent importance warrants the second notice.

QUESTIONS AND ANSWERS ABOUT GOVERNMENT INSURANCE FOR SOLDIERS, SAILORS AND MARINES

Question 1. What kind of policies are offered by the Bureau of War Risk Insurance into which I may convert my present term insurance?

Answer. The Bureau offers six (6) policies, as follows:

- Ordinary Life Policy
- Twenty-payment Life Policy
- Thirty-payment Life Policy
- Twenty-year Endowment Policy.
- Thirty-year Endowment Policy
- Endowment Policy Maturing at Age 62.

(See Question 13 for a description of these policies.)

Question 2. How long a time do I have in which to convert my insurance?

Answer. Five years after peace is declared. If you keep your term insurance in force during this period, you can convert it at any time. If you do not convert it, it will cease at the end of five years.

Question 3. Will the Government continue to carry the insurance after it is converted?

Answer. Yes.

Question 4. Do I have to pass a physical examination in order to convert my insurance?

Answer. No.

Question 5. How may I convert my present insurance into one of the permanent forms?

Answer. By making application in writing to the Bureau of War Risk Insurance on the form furnished by the Bureau. Such application must be accompanied by the first premium for the converted insurance.

Question 6. When is the premium payable on the converted insurance, and how must it be paid?

Answer. Premiums may be paid monthly, in which case they are payable on the first day of the month. They may also be paid quarterly, semi-annually or annually. Should you pay quarterly, semi-annually, or annually and die, the discounted value of the premiums paid in advance beyond the calendar month in which death occurs would be refunded.

All premiums are due on the first of the month, and the insured has the remainder of that month as a grace period in which to pay the premium. No in-

terest charge is made for this grace period, and the policy remains in full force during that period, the unpaid premiums being deducted from any settlement under the policy.

Payment should be made by money order or check payable to THE TREASURER OF THE UNITED STATES, and sent to the PREMIUM RECEIPT SECTION, BUREAU OF WAR RISK INSURANCE, WASHINGTON, D. C.

Question 7. Do I get any credit on my converted policy for the premiums which I am paying on my present term insurance?

Answer. No.

Question 8. Will the premiums on my converted policy be higher than those on my present policy, and if so, why?

Answer. Yes. The reason is that you are buying insurance at a "level rate," which means that you pay the same premium throughout the whole period, and that your premiums do not increase from year to year, as is the case with your present term insurance. In addition, by the payment of larger premiums now you secure certain privileges in the policy such as cash surrender value, loan value, and paid-up and extended insurance value. (See question 14 for a description of these values.)

Question 9. Can anyone else besides myself change the beneficiary of my insurance?

Answer. No.

Question 10. Does a person have to be dependent upon me in order to be named as my beneficiary?

Answer. No.

Question 11. May I convert a part of my insurance and retain the remainder in its present form?

Answer. Yes. You may convert any amount from \$1,000 up to \$10,000, in multiples of \$500.00.

Question 12. What protection does the converted insurance provide, and what benefits are payable?

Answer. It protects you in the event you become totally permanently disabled, and it protects your beneficiaries in the event you die. The benefit payable is \$5.75 per month for each \$1,000 of insurance that you carry, and the payment of these monthly installments is continued for 240 months. If, however, you become totally permanently disabled and live longer than 240 months, the installments will be paid to you so long as you live and are so disabled.

Question 13. What is the description of the various forms of policies which the Bureau offers?

Answer. (a) *Ordinary Life Policy*.

On an ordinary Life Policy the premiums are payable during the life of the insured, and the policy becomes due and payable at the time of the death of the insured or upon his becoming totally permanently disabled.

(b) *Twenty-payment Life Policy*.

On a Twenty-payment Life Policy the premium is payable only during 20 years, and the policy becomes due and payable at the time of the death of the insured or upon his becoming totally permanently disabled. The difference between a Twenty-payment Life policy and an Ordinary Life policy is that instead of

paying premium throughout his lifetime the insured pays only for twenty years.

(c) *Thirty-payment Life Policy*.

On a Thirty-payment Life policy the premium is payable during only thirty years. In every other respect it is similar to the Twenty-payment Life policy.

(d) *Twenty-year Endowment Policy*.

On a Twenty-year Endowment policy the premium is payable only during twenty years. At the end of twenty years, if the insured is still living, the amount for which he is insured will be paid to him in one sum. If, however, the insured dies or becomes totally permanently disabled before the end of the twenty years, the policy will become due and payable in installments.

(e) *Thirty-year Endowment Policy*.

On a Thirty-year Endowment policy the premium is payable only during thirty years. At the end of the thirty years, if the insured is still living, the amount for which he is insured will be paid to him in one sum. If, however, the insured dies or becomes totally permanently disabled before the end of the thirty years, the policy will become due and payable in installments.

(f) *Endowment Policy Maturing at Age 62*.

On an Endowment Policy maturing at age 62, the premium is payable only until the insured becomes 62 years of age. When the insured reaches 62 years of age, the amount for which he is insured will be payable to him in one sum. If, however, the insured dies or becomes totally permanently disabled before reaching the age of 62, the policy will become due and payable in installments.

Question 14. Will my converted policy contain all the usual provisions included in policies issued by private companies. If so, what are they?

Answer. Yes.

After one year the new (converted) Government policies will have guaranteed cash and loan values, and also paid-up insurance and extended term insurance values. Policies issued by private insurance companies usually do not give these values until the insurance has been in force for three years. Furthermore, the value guaranteed by the Government give you full money's worth without any "surrender charge." This is a distinct advantage to you.

The "cash value" of a converted Government policy is the amount the Government gives you if you choose to give up your insurance.

The "loan value" means that you can borrow money on your policy up to 94 per cent of the cash value.

"Paid-up insurance and extended term insurance values" mean that in the new policies, if you stop paying premiums after one year, the Government allows one of the following two options:

(a) To remain insured for a certain time without cost to you.

(b) To receive a policy for a smaller amount, which will be paid no matter when you die, but on which you will not have to pay any more premiums.

Question 15. Is any provision made for paying dividends on the converted policies?

Answer. Yes. The converted policies provide for

payment of dividends from the gains and savings as they may be determined and apportioned.

Question 16. Is the insurance subject to claims of creditors, is it taxable, and is it assessable?

Answer. No.

Question 17. If I do not pay my premiums on a converted policy when they fall due or within the days of grace, do I lose my insurance altogether?

Answer. No. The Bureau offers liberal provisions for reinstating your converted insurance after it has lapsed for the nonpayment of premiums. In order to learn the conditions on which you may make reinstatement of a converted policy, you should make application to the Bureau.

Question 18. Can I reinstate my term (wartime) insurance, if it has been dropped or cancelled, and will I have to pay the overdue premiums?

Answer. In a new decision (T. D. 47 W. R.) signed July 25, 1919, the Secretary of the Treasury ruled that discharged soldiers, sailors and marines who have dropped their insurance may reinstate it within eighteen months after discharge without paying the back premiums. All they will be asked to pay will be the premium on the amount of insurance to be reinstated for the month of grace in which they were covered and for the current month.

Thus, for example, if a man dropped \$10,000 of insurance in January, 1919, and applies for reinstatement the first of August for \$5,000, all he will have to pay will be the premium for January (the month of grace) on \$5,000. Or if he applies for reinstatement of the full \$10,000, he will pay a total of two months' premiums on \$10,000, one for January and one for August. He will not have to pay premiums in either case for the intervening months.

The decision stipulates that the former service man applying for reinstatement be in as good health as at date of discharge.

Former Treasury Decision W. R. 45 and other prior regulations in conflict with the new decision, are revoked.

Director R. G. Cholmeley-Jones of the Bureau of War Risk Insurance, following the signing of the decision made the following statement:

"The present decision is one of the most important to former service men that has been made in the history of the Bureau.

"Many service men have been deterred from availing themselves of the former and less liberal reinstatement privileges by reason of the relatively large amount of money represented by accumulated overdue premiums, and that it would seem that they were paying for something that they never actually had, which in fact, was the case.

"Under the new decision a man is relieved of the burden of overdue premiums. He has an opportunity to rehabilitate himself financially after getting out of the army, navy, or marine corps, and to reinstate his insurance any time within eighteen months following discharge without the burden of paying a large amount of money.

"The reason payment for the month of grace is

required under the new decision is that the insured was protected by reason of his insurance continuing in force during that month, and that had he died during the period of grace, his policy would have been paid.

"Should a lapse again occur, *after* the eighteen months from date of discharge, reinstatement may be made, providing that at the time of application for reinstatement, such insurance shall not have been lapsed for more than one year, in accordance with the conditions of the decision.

"Of course every man who has dropped his insurance should reinstate it immediately, for the reason that if he should die before reinstatement, his dependents will not receive any payment.

"Therefore, I urge that care be taken to make clear to every former service man who has dropped his insurance that the new ruling *does not* automatically reinstate him, and to impress upon him that he will be *without insurance* until he voluntarily applies for and secures reinstatement. He should immediately apply for reinstatement for his own protection and that of his dependents.

"Don't forget that men die or become disabled in peace time as well as in war time, and that if a man waits he may not be in as good health as he was at the time of his discharge and consequently may not be able to secure reinstatement."

"Don't put off reinstatement. Do it now."

Question 19. Can I reinstate a part of my insurance only?

Answer. Yes.

Question 20. Is it worth while to continue the insurance and convert it if I have no relatives within the permitted class?

Answer. Yes. Even if you are without dependents your Government policy is just as valuable to you. It provides against your total permanent disability. You can convert to a Government Endowment policy which will assure financial comfort in later years.

Question 21. To whom can I go in order to have a personal talk with some one about my war risk insurance?

Answer. To Home Service Sections of the Red Cross. Also a large number of representatives of life insurance companies, and others, have volunteered their services to give you full information about your Government insurance. These volunteers are enrolled in the Bureau and most of them are bearing the Bureau's enrollment "W. R. I." pin. Do not hesitate to go to any one of them for information and advice.

Question 22. In writing to the Bureau about my insurance, what information must I give?

Answer. All communications about insurance should be addressed to the Insurance Division, Bureau of War Risk Insurance, Washington, D. C., and should contain the following information:

1. Your *full* name and address.
2. Your rank at the time of applying for insurance.
3. Your organization at the time of applying for insurance.
4. Your army serial number, if known.

5. The number of your insurance certificate, if known.

KEEP UP YOUR WAR RISK INSURANCE, IF
DROPPED IT CAN BE REINSTATED.

Ex-Soldiers, Sailors and Marines:

Don't give up your Government Insurance.

If you have allowed it to lapse, reinstate it—protect your loved ones.

TREASURY DEPARTMENT
BUREAU OF WAR RISK INSURANCE
WASHINGTON

August 4, 1919.

To the Editor: Soldiers, sailors, and marines and their dependents in every community want to know the facts about their Government Insurance. It is our duty as a grateful nation to urge them to keep their insurance, which in recognition of their sacrifices has been provided as their exclusive right and certificate of honor. It is similarly our national duty to show them how to obtain any proper compensation to which they may be entitled, how to submit proper claims and to enable them to secure promptly adjustments of matter pertaining to allotments and allowances.

Unfortunately, many, through misunderstanding, misinformation, or other causes are permitting their insurance to lapse. Upon leaving the service a large proportion become transient, with the result that this Bureau has no way of reaching them by direct mail. Others move and fail to send their forwarding addresses to Washington. Still others fail to furnish enough detailed information to identify their cases in millions of records in which there is an almost unbelievable number of instances where scores and even hundreds have the same name. These duplications are often further complicated by the fact that many of the dependents of these same men, in turn, have names which are spelled exactly alike.

In view of the foregoing and other reasons, it is vitally necessary, in order that our fighting men and their loved ones may be fully protected, that a national volunteer campaign for the conservation, reinstatement, and conversion of War Risk Insurance, and the expeditious handling of compensation and claims and allotment and allowance matters, be instituted for the benefit of these who now are out of touch with the Bureau.

Publication in your columns of a strong recommendation that your soldier, sailor and marine readers who have dropped their insurance send the money for two months' premiums on the amount of insurance they wish to reinstate, in accordance with the new ruling on reinstatement, with their application for reinstatement (Form 742) with the five points of necessary information, to the Bureau of War Risk Insurance, at once, will be a great and valuable National Service. The same five points of information must be

sent with each letter to insure identification of the files and a prompt reply from the Bureau.

The other material in this and other information sheets which will be sent you from time to time is furnished to enable you to publish or adapt for editorial use as much current information for the benefit of service men about Government Insurance as you find consistently possible.

I believe that a Question and Answer Department for the handling of inquiries in your paper would be appreciated by and prove popular with your readers.

If there are men in your locality who have failed to receive replies to letters to the Bureau, kindly have them furnish the information requested on the information form and each case will have immediate attention. Assuring you that your cooperation in securing the conservation, conversion, and reinstatement of War Risk Insurance will be a splendid service to our fighting men and will go far to prevent widespread destitution, dependency, and suffering in many of our soldier families in the years to come, I am,

Sincerely yours,

R. G. CHOLMELEY JONES, Director.

SOME ADVANTAGES AND VALUABLE FEATURES OF
GOVERNMENT INSURANCE POLICIES

Some advantages of government insurance policies are pointed out by Director R. G. Cholmeley-Jones of the bureau of war risk insurance, as follows:

Discharged soldiers, sailors and marines who have dropped or canceled their insurance may reinstate it within eighteen months without paying the back premiums, provided they are in as good health as at the date of discharge.

You may pay your premiums by the month without having to pay anything extra on account of the additional expense to the Government of collecting monthly premiums. Or, if you prefer, you may pay quarterly, semiannually, or annually. The Government pays all the expenses of running the business.

Your Government insurance is protected from the claims of creditors. Your insurance money can not be taken away from you (or later from your beneficiary) for the payment of your debts or those of your beneficiary. This is a most important provision, which insures your insurance.

Government insurance is non-assignable, which means that neither you nor your beneficiary can lose the fruits of your labor and sacrifice by pawning your insurance.

Neither you nor your beneficiary ever will have to pay a cent of taxes to the Government on the proceeds of your Government insurance.

Government insurance policies contain a total disability clause, making them payable at any time you may become totally and permanently disabled, regardless of your age.

No policy ordinarily issued by a private company contains a similar clause running beyond the age of 65.

Another advantage of Government policies is that a service man, after his return to civil life, may engage in any occupation no matter how hazardous,

including military service, or may travel anywhere, without affecting his insurance, provided he keeps his premiums paid.

No physical or medical examination is necessary for the conversion of policies. Physical examination would be necessary before you could obtain insurance from any other source.

You may not be able to pass such an examination, or, if later you try to get private insurance, something may have happened to your health in the meantime and you may find it impossible to get life insurance of any kind.

FIVE POINTS

Of information that should be sent to Bureau of War Risk Insurance, Washington, D. C., with each inquiry about a specific case involving insurance:

1. Full name (including first, middle, and last name) and complete address.
2. Rank at the time of applying for insurance.
3. Army or Navy organization at time of applying for insurance.
4. Army serial number, if in the Army.
5. The number of insurance certificates, if known.

If this is done, the handling of the matter will be greatly expedited.

IMPORTANT NEW DECISION ON REINSTATEMENT

Secretary of the Treasury Carter Glass, on July 25, signed a decision of momentous importance and interest to discharged soldiers, sailors, and marines.

In the decision (T. D. 47, W. R.) the Secretary ruled that discharged soldiers, sailors and marines who have dropped or cancelled their insurance may reinstate it within eighteen months after discharge without paying the back premiums. All they will be asked to pay will be the premium on the amount of insurance to be reinstated for the month of grace in which they were covered and for the current month.

Thus, for example, if a man dropped \$10,000 of insurance in January, 1919, and applies for reinstatement the 1st of September for \$5,000, all he will have to pay will be the premium for January (the month of grace) on \$5,000 and the premium for September on \$5,000. Or, if he applies for reinstatement of the full \$10,000, he will pay a total of two months' premiums on \$10,000, one for January and one for September. He will not have to pay premiums in either case for the intervening months.

The decision stipulates that the former service man applying for reinstatement be in as good health as at date of discharge.

Former Treasury Decision 45, W. R., and other prior regulations in conflict with the new decision are revoked.

Director R. G. Cholmeley-Jones, of the Bureau of War Risk Insurance, following the signing of the decision made the following statement:

"The present decision is one of the most important to former service men that has been made in the history of the bureau.

"Many service men have been deterred from availing themselves of the former and less liberal reinstatement privileges by reason of the relatively large amount of money represented by accumulated overdue premiums, and because it would seem that they were paying for something that they never actually had, which, in fact, was the case.

"Under the new decision a man is relieved of the burden of overdue premiums. He has an opportunity to rehabilitate himself financially after getting out of the Army, Navy, or Marine Corps, and to reinstate his insurance at any time within 18 months following discharge without the burden of paying a large amount of money.

"The reason payment for the month of grace is required under the new decision is that the insured was protected by reason of his insurance continuing in force during that month, and that had he died during the period of grace his policy would have been paid.

"Of course, every man who has dropped his insurance should reinstate it immediately, for the reason that if he should die before reinstatement his dependents will not receive any payment.

"Therefore, I urge that care be taken to make clear to every former service man who has dropped his insurance that the new ruling *does not* automatically reinstate him, and to impress upon him that he will be *without insurance* until he voluntarily applies for and secures reinstatement. He should immediately apply for reinstatement for his own protection and that of his dependents.

"Don't forget that men die or become disabled in peace time as well as in war time, and that if a man waits he may not be in as good health as he was at the time of his discharge and consequently may not be able to secure reinstatement.

"Don't put off reinstatement. Do it now."

If the policyholder is unable to keep the full amount of War Risk Insurance he carried while in the service, he may reinstate part of it from \$1,000 up to \$10,000, in multiples of \$500. Reductions may be made in multiples of \$500 to any amount, but not less than \$1,000. Premiums are due on the first of the month, although payments may be made any time during the calendar month.

Premiums should be paid by check, draft, or money order payable to the *Treasurer of the United States*, and sent to the *Premium Receipt Section, Bureau of War Risk Insurance, Washington, D. C.*

SCIENCE AND ALCOHOL

It is gratifying in the extreme to the editors of *American Medicine* to find their views on prohibition, frankly recorded in these columns during the last few months, so strongly fortified by the opinions of men as high in the esteem of the public and the profession as Drs. A. A. Brill, Joseph Byrne, L. Pierce Clark, Smith Ely Jelliffe, C. P. Sherwin, E. E. Southard and a score of other well known specialists. At a recent meeting of the

New York Academy of Medicine a discussion was arranged by the Section on Neurology and Psychiatry, and the authorities named expressed their frank views on the dangers that will menace the social fabric when prohibition comes into effect. With amazing unanimity they agreed that the evils resulting therefrom will far outweigh any little good that may come of it. Whatever the anti-alcohol forces may have to say about such an opinion (and they will surely feel constrained to answer such serious criticism), they cannot attack the authenticity of the judgment given at this meeting. It was not a sentimental pronouncement emanating from hysterical reformers, nor was it a campaign maneuver on the part of defiant reactionaries. These specialists have no axe to grind, they are the servants of no special interests. They met as scientists, and as scientists they came to a cool, unbiased, honest decision. And the decision was against prohibition, on the ground that it constituted an invitation to substitute habits which will be much more dangerous than drink to the common welfare. In expressing this view, they drew both upon their experience in the past and their equipment to judge the future. Surely it would be hard to find a body of men better fitted to give an expert opinion on this subject.

What was said at this meeting of the Academy of Medicine has been repeatedly stated in these columns, and it is perhaps of interest to note here that the editorials have been written by men who are absolute teetotalers, or practically so. The value of these opinions, then, has been that of the testimony of a disinterested witness whose sole concern is the unperturbed pursuit of the truth. Though it was unhesitatingly admitted that, at the base of the prohibition movement, there was a fine and worthy motive, attention was directed to the fact that the whole movement was purely a negative one. It was destructive only—elaborately conceived on its destructive side, utterly undeveloped and poorly informed on the constructive side. Alcohol was to be definitely eliminated, but what was to take the place of a habit that had taken such deep root in the life of the average individual was not stated; or, if stated, was so scantily referred to as to offer little help. There was only one speaker at the Academy who had even a good word for prohibition; and, though he admitted that "the reign of King Alcohol had been a disastrous one," he asserted that his abdication could be made of benefit to humanity only by carrying out a most elaborate and costly plan for amusements, recreations, and social opportunities as an adequate substitute. Such a plan, admittedly, has not been worked out by the anti-alcohol forces; and prohibition threatens to come upon us before a substitute has been provided. One knows from past experience the dangers that would face the community in such an event: the increased use of drugs, the accentuation of social unrest, ruinous experiment with new stimulants, and, strangely enough,

even the increase of the consumption of alcohol in the guise of medicinal preparations.

These dangers have been repeatedly emphasized here and they were emphasized, in almost the self-same language, at the meeting referred to. In particular, stress was laid upon the danger of social unrest, and the lapse of the individual into various degrees of neurosis. There are few men in this country who understand better than Dr. Smith Ely Jelliffe the condition of strain imposed on modern humans by the highly artificial and trying standards which our so-called civilized form of life demands. Dr. Jelliffe made it clear that drink was more of a blessing than a curse, in that it stayed the evil effects that such trying conditions might induce and soothed into quiescence more vicious and more dangerously anti-social reactions. Drinking might be a great evil, but the evils it prevented were far worse. Likewise, Dr. A. A. Brill pointed out that drunkards were men and women predisposed by inheritance or acquirement to crime and vicious practices and that alcohol saves them from following the more violent bent of their natures. Without drink, these people would inevitably yield to temptations of a more menacing type. Incidentally, he brought out the fact that in his practice men and women who had abused the use of alcohol and were deprived of it often acquired other excesses—notably that of overeating. The "food jag" took the place of the "alcohol jag"—a type of excess which, in its individual aspect, is not less harmful than the excess it displaced.

These facts were not brought out at the Academy meeting because of any prejudiced hostility to the prohibition movement, and they are not repeated here with a view to cast discredit on the motives of its leaders. These are admittedly of the very humanest. But, at the same time, one must call attention to the short-sighted philosophy of those who permit the promise of vague benefits to blind them to the hazards of the future threat. And that this threat is a grave one, few will doubt. It is as though drugs, having done a considerable amount of mischief, a movement were set afoot to abolish entirely the use of drugs. It is easy to perceive the absurdity of such an attempt. Drugs serve a very useful and very necessary purpose, and though there is at the present moment being conducted a campaign against drugs, it is directed entirely (and wisely) against those narcotics which bring harm without any commensurate good. It is hard to understand why the prohibition movement has not taken this form—attacking the vicious use of alcohol and preserving its harmless employment. Such a plan would arouse little hostility. It would find friends among all classes. An indication of how even the sanest leaders of society feel is offered by President Wilson's wise suggestion that beer and light wines be retained. Whether Congress will see fit to act on his suggestion, it is too early to say; but it is safe to assert that President Wilson, in making his rec-

ommendation, was well aware of the preference of the vast majority of citizens. The prohibition forces, aroused by this step, are preparing to fight the issue with all the influence they command. One can only regret the stubbornness and lack of vision which the persistence shows.—American Medicine, May, 1919.

NATIONAL HEALTH INSURANCE DETRIMENTAL TO THE STATUS OF THE MEDICAL PROFESSION OF GREAT BRITAIN

Mr. Frederick L. Hoffman of the Prudential Insurance Company, who is now on an extended English trip for the purpose of thoroughly investigating the methods and results of National Health Insurance in Great Britain, wrote the editor of the *Journal of the Medical Society of New Jersey*, under date of July 15, 1919, as follows:

I have just finished reading a large amount of original information received from England and I am absolutely of the opinion, in the light of my present knowledge, that National Health Insurance has been decidedly detrimental to the status and well-being of the medical profession of Great Britain. The doctors have been reduced to the status of mere clerks or servant of Approved Societies and there has been developed a tendency to the granting of dishonest certificates as an aid to malingering and fraud upon the funds. A large amount of the practitioner's time is taken up with National Health Insurance which have nothing to do with the practice of medicine as a healing art. Doctors are continually on trial before Insurance Commissioners for alleged offenses against the act, chiefly over-prescribing, with that it is more true of England today than of any other country in the world, unless it be Germany, that there is a reign of terror and chaos, in consequence of a fatuous policy of alleged social reform.

The President of the Illinois State Medical Society in his annual address, May, 1919, said:

The organized profession which will have to work under this law does not demand it, organized labor has condemned it, the employers of labor, as represented by the various national organizations, Chambers of Commerce and Civic Federations, have all gone on record as being opposed to it. It is being fostered by and originated with the "American Association for Labor Legislation," which is in nowise connected nor in any way affiliated with organized labor. However, the supporters of this measure have a strong organization to promote its enactment, so strong that it has been successful in enlisting many prominent medical men in its defense, and it will only be by the united team work

of the members of this society that it will be defeated in this state.

Committee on Social or Health Insurance of the Illinois State Medical Society:

Ed. H. Ochsner,	Joseph Fairhall,
George Apfelbach,	S. V. Balderston,
C. A. Hercules,	Cleaves Bennett,
W. F. Burres,	E. W. Fiegenbaum,
Henry F. Bruning,	W. D. Chapman,
<i>Chairman.</i>	<i>Secretary.</i>

ONE FORM OF AUTOCRACY HAS DISAPPEARED—IS ANOTHER TO TAKE ITS PLACE?

COMPULSORY HEALTH INSURANCE

To deprive any citizen of the privilege of putting his life in the hands of a physician of his choice is un-American and it is equally un-American to compel a physician to attend a person in sickness when for a good reason he would like to be excused. If a man must submit his life to the dictates of a bureaucracy, such a man is robbed of his liberty and independence as it is related to that which is above all things sacred to him.

Where is the justice or equity of discriminating legislation that would advocate a bureaucracy to control and dominate the members of the medical profession to the extent that such bureaucracy shall determine the personnel of a physician's clientele and the fee he may charge regardless of the qualifications attained and the specially skilful service rendered? One cannot be in sympathy with such a contemptible state-wide lodge practice. Why should the members of the medical profession, who at present rank in qualifications with that of any other profession or calling, be commercialized at the instigation of comparatively few apparently self-appointed ultra enthusiasts who pose as deeply interested in the physical welfare of the people of our commonwealth and who do not see fit to apply the same principle in every other line of human endeavor? It is just as un-American for a bureaucracy to determine the clientele of a physician as it would be to determine the clientele of a butcher, a baker, or a candlestick maker. There is no difference in the application of the principle.

The physical welfare of our people was never

so well taken care of as now. Preventive medicine has made tremendous progress and is the outgrowth of work accomplished by the organized medical profession. Nowhere in our country was it the result of the importation of any foreign scheme that has brought ruin to the profession wherever adopted. This whole propaganda appeals to one as artful sophistry, a species of Michiavelianism.—*G. E. H. in Penn. Med. Jour.*

HISTORICAL DATA

In the John Crearer Library, Marshall Field Building, Chicago, Illinois, can be found a complete file of the ILLINOIS MEDICAL JOURNAL. The editor and the trustees feel that it is best that these valuable historical records of the transactions and proceedings of the Society be stored in a fireproof building instead of being kept in a private home as in the past. In the Crearer Library they are not only safe from the ravages of fire but they will be card indexed and accessible at all times.

INFANT WELFARE IN GERMANY DURING THE WAR.

In all Europe and, of course, more especially in those countries engaged in war, infants and children have suffered severely, and this constitutes one of the most important after-the-war problems. Conditions in Germany during the war have been largely veiled in obscurity, or camouflaged, as they seemed to suit military exigencies or the wishes of the ruling caste. The reports from Germany itself in the past four years have been so contradictory that no reliance whatever could be placed on them, and even now it is very difficult to arrive at the truth. When the war was going on it was usually declared that infants and children were not very adversely affected by the blockade; but now that Germany is beaten, and it is the policy of the country to appeal to the sympathies of the world at large, it is asseverated.

that hundreds of thousands of infants and children were wiped out by Great Britain's cruel blockade. The truth appears, as is generally the case, to lie between these two extreme statements, and probably Germany suffered in infant mortality to about the same extent as the other big warring countries, and

less than the smaller countries, as Belgium, Poland, Serbia, and Roumania. It must always be borne in mind that for a considerable part of the war the blockade was notoriously inadequate.

The real facts of the condition of infants in Germany while the war was in progress are beginning to leak out. Recently an instructive summary concerning infant welfare in Germany during the war has been given in a report prepared by the intelligence department of the British Local Government Board in 1918, which has just been published. The summary was reproduced in *Public Health Reports* for February 14, 1919.

The most striking feature of the information set down in the document is the heavy decrease shown in the number of births. Some 40 per cent fewer babies were born in 1916 than in 1913. On the whole, the infantile death rate was well kept down. According to the British report, the reduction in the rate was due partly to the special measures taken and partly also because of the cool summers. The chief measure adopted in Germany to promote infant welfare during the war was the distribution of imperial maternity grants. One of these grants is given only to women who feed their babies at the breast, the encouragement of breast feeding being regarded as one of the most powerful agencies for furthering infant welfare.

Illegitimacy increased greatly in Germany in the past few years. The proportion of illegitimate births in the entire German Empire is between 9 and 10 per cent, and in certain districts the rate is much higher. The care of foster children was interfered with by the war on account of the mobilization of medical men appointed to look after them. However, when affairs had become settled on a war basis, illegitimate children were cared for better than ever before. Foster children and children whose mothers were working outside were taken care of both in homes and in institutions. It is claimed by those concerned in the welfare of infants and young children that these are better cared for by trained and supervised workers in creches or infants' homes than in the houses of foster mothers, especially in view of the difficult food conditions that must still prevail for a considerable time.

A discussion of the subject of infant welfare in Germany recalls the recent request of workers in this field to the British Government for permission to import from England a supply of rubber nipples for nursing bottles. The petitioners urged that this was imperatively necessary to save the lives of thousands of infants, and to clinch the point by an unanswerable argument they added that if this request was refused, by 1933 there would be no men fit for army service. The naivete of this statement is delicious, and is on a par with many other manifestations of the utter humorlessness of Teutonic efficiency. With minds set on the goal, they are absolutely blind and deaf to all side issues.—*Medical Record*, March 22, 1919.

SHORTER HOURS FOR NURSE, DEMAND AT MEETING HERE.

Resolutions were adopted at the closing session of the twenty-fifth annual meeting of the National League of Nursing Education in the Congress hotel as follows:

For shorter hours for nurses.

Advocating that schools for nursing include courses in mental diseases, care of children, communicable diseases, and public health.

For inspection of schools of nursing.

Military rank for nurses serving in the army or navy.

Correspondence

THE CONSTITUTIONAL CONVENTION

APATHY OF PHYSICIANS

Galena, Ill., Aug. 12, 1919.

To the Editor: The recent attempted legislation relative to the medical profession of this state should cause us to prick up our ears and at least stimulate us to some interest in legislation.

With this thought in view, and believing that the medical profession should be represented in the Constitutional Convention I sent the following communication to all the physicians in this, the Twelfth Senatorial District, comprising the counties of Jo Daviess, Carroll and Stephenson, with the hope that some physician might become a candidate for delegate to the convention.

READ THIS, DOCTOR

The Constitutional Convention meets in January, 1920, for the purpose of revising or rewriting the Constitution of the State of Illinois.

Each Senatorial District in the state is entitled to two representatives or delegates. These delegates are elected by the people of each Senatorial District. To become a candidate at the primary election, it is necessary to file a petition signed by one-half of one per cent of the vote cast in the district for Governor at the last election. The petition must be filed with the Secretary of State before the first day of August, 1919.

Who is going to represent the Medical Profession from the Twelfth District—including Stephenson, Jo Daviess and Carroll Counties?

The medical profession should see that we have representation in this convention and should put out a candidate in many districts of the state.

Let us not leave the framing of the fundamental law of the state entirely to others. *Let us have something to say! The profession is vitally interested.*

Reply on enclosed postal expressing your choice of

some physician in the district for a delegate to the Constitutional Convention.

Per DR. G. W. RICE,
Sec. Jo Daviess Co. Med. Society,
Galena, Illinois.

Out of ninety-five communications sent out I received twelve replies expressing a choice. Doesn't that show some interest in a convention that is to revise or re-write the fundamental law of our state!! Who in that convention will look after the interests of the medical profession? Of course we can maintain a lobby under the direction of our committee on legislation and receive telegrams and form letters from them asking us to use our influence with our delegates.

Is it any wonder that the professional politician says, "The doctors can go to hell" when only twelve out of ninety-five will express a choice on a subject of such vital importance as revising the constitution of this state?

G. W. RICE.

Public Health

PREVALENCE OF INFANTILE PARALYSIS IN ILLINOIS.

The Division of Communicable Diseases of the State Department of Public Health reports an increased prevalence of infantile paralysis dating from July 1st with new cases being reported almost daily. For the current year from January 1st to June 30th there were 45 cases of infantile paralysis in this State. During the month of July alone 51 cases were reported, or six cases more than had been reported during the first six months of the year. Between August 1st and August 22nd, 68 additional cases had been located.

An interesting feature of this outbreak of poliomyelitis is that the new cases are being reported in many instances from exactly the communities in which the first cases were noted in the outbreak of 1916. In 1916 the first cases were found in the village of Standard in Putnam County, where five cases with two deaths have been noted within the past few weeks. It will be recalled that in 1916 La Salle County and particularly that section in the neighborhood of La Salle County was particularly hard-hit. At the present time cases are reported in four sections in La Salle County and in the adjoining counties, and in seven communities of the adjoining counties of Bureau and Putnam. Since the compilation of data on August 22nd, 5 cases have been reported in Monticello, Piatt County. There were a number of cases in and about Piatt County during 1916.

In addition to the active cases of poliomyelitis located through the reports of physicians to the Di-

vision of Communicable Diseases or through the investigations of epidemiologists, the Division of Child Welfare and Public Health Nursing reports that in all of the eighteen clinics for crippled children patients are being presented for diagnosis and treatment who show the after-effects of infantile paralysis not recognized during the acute stages of the disease.

It is difficult to determine the comparative prevalence of poliomyelitis at the present time with that of several years ago, inasmuch as the attention given to the subject by the State Department of Public Health and the apprehension occasioned by the eastern epidemic of a few years ago, have led to a more careful diagnosis by physicians and to a greater willingness to report both known or suspicious cases as required by the Rules of the Department.

BATHING AT WATER SUPPLY SOURCES.

The State Department of Public Health issued communications to local health officers and other public officials urging that definite steps be taken to prevent bathing and swimming in reservoirs, lakes, streams or other sources of municipal water supply. It has been ascertained that a number of communities where the water supply is otherwise satisfactorily and thoroughly protected that swimming in reservoirs is permitted or, if forbidden, is not effectively prevented. Cases are available where the use of sources of water supply for swimming has resulted in serious outbreak of water-borne disease, that regardless of the development of disease the Department of Health holds that the use of public reservoirs for bathing or swimming is repugnant to all sense of decency and should be absolutely prohibited.

IMPROVED WATER SUPPLY IN ILLINOIS

The Division of Sanitation of the State Department of Public Health is concluding investigations for the establishment of a water supply in Virden, Macoupin County. Up to this time Virden has been the largest city in Illinois without a public water supply. Through extensive investigations which have extended over a period of three years it was found that there was no ground water supply available and consequently it became necessary to draw the supply from Sugar Creek. The Virden plant will consist of an earthen dam with a concrete spillway making a reservoir with a capacity of 80 million gallons. The water will be pumped from this reservoir to a filtration and purification plant.

The Division is also making an investigation of the proposed water plants for Christopher, Franklin County; Carthage, Hancock County; and Newton, Jasper County.

At Christopher the present water supply will be treated with liquid chlorine. The Department of Public Health has recommended in addition to this a filtration plant which is to rid the water of foreign material and to overcome occasional tastes and odors. The filtration plant cannot be installed at the present time on account of lack of funds.

The plant at Carthage involves a filtration and purification works for the proper treatment of water which is now being drawn from Long Creek.

At Newton experiment wells are being driven under the direction of the Division of Sanitation for the purpose of securing the water supply to take the place of the present protected supply drawn from the Embarrass river.

BETTER BABIES CONFERENCE AT STATE FAIR.

The Better Babies Conference conducted by the State Department of Public Health in conjunction with the Illinois State Fair was larger this year than at any time in the past and there was noticeable a disposition on the part of the parents to seriously utilize the Conference as a means for promotion of health of infants, rather than as a purely competitive baby show. Of the 547 infants examined ranging in age from six months to five years a large number were entered in the non-competitive class in an effort on the part of the parents to ascertain the causes of recognized physical deficiencies and to learn the best means of overcoming these conditions. In addition to the non-competitive class the interest in improvement in the physical condition of children was manifested by a group of approximately 150 in the so-called "Improvement Class." These children had been examined at previous annual conferences and were brought back this year for re-examination and for comparison of their former and present ratings.

While a large number of competing children came from the central part of the State there were over fifty counties represented, a wider distribution of representation than in any previous year.

The conference was held under the immediate supervision of Dr. C. St. Clair Drake, Director of Public Health, with the assistance of the heads of the several divisions of the Department, a group of volunteer physicians and a large corps of nurses. Certain phases of the examination were carried out by physicians and nurses furnished for the conference by the State Department of Public Welfare.

The exhibits of the Department of Health this year were more extensive than ever before, occupying over one-half of the balcony of the large exposition building, this section proving one of the most popular features of the entire fair. Throughout the entire exhibit the policy of conferences was carried out, the chiefs of the several divisions being present to confer with health officers, physicians and other interested persons on all phases of public health work.

EAST ST. LOUIS SURVEY.

The general sanitary survey of East St. Louis which is being carried out by the State Department of Public Health in conjunction with the War Civics Committee is being rapidly completed. The field staff under the direction of Paul L. Skoog, Chief of the

Division of Surveys and Rural Hygiene, have returned to Springfield where the final report is in process of preparation.

A staff of workers is now in the field conducting a tuberculosis survey which is being carried out by the Department of Public Health and which has been financed largely by a special grant of money from the National Tuberculosis Association and an appropriation from the St. Clair County Medical Society.

The tuberculosis work in East St. Louis is expected to be more than a survey; the plan being not only to investigate the tuberculosis situation but to leave in operation all of the machinery necessary to the modern warfare against tuberculosis disease.

The health survey of Alton, in conjunction with the local medical profession and the Alton Commercial Association, will be begun about September first.

DEDICATION OF THE McLEAN COUNTY TUBERCULOSIS SANITARIUM.

The McLean County Tuberculosis sanitarium established under the supervision of the county sanitarium law after referendum vote of the people, was dedicated and opened for patients on Sunday, August 17th. This sanitarium, which is known as "Fairview," is said to be one of the most beautifully equipped institutions in the middle west, excelling in many particulars the more pretentious private sanatoria. Under the provision of the Illinois law county sanatoria are free to all persons regardless of their financial condition and the standard set by the McLean County board was that the institution was to be suitable for the care of all classes of persons.

The medical director of "Fairview" is Dr. Bernice Y. Curry, who for some time has been director of the McLean County tuberculosis dispensary and recently completed a special course in tuberculosis at the Tudor School at Saranac Lake, New York.

It is said that every bed in the McLean County institution was occupied at the time of opening.

This is the second county sanitarium to be opened of the forty created by vote of the people of Illinois during the past two years. The La Salle County tuberculosis sanitarium was opened last February. The Morgan and Adams County sanatoria are rapidly approaching completion.

PROBABLE RECURRENCE OF "FLU" EPIDEMIC.

The Division of Communicable Diseases of the State Department of Public Health is conducting extensive investigations of infectious colds prevalent in several sections of the State and particularly noted in the counties of Peoria, Stark, Bureau, Madison and some points in McLean county, and which is regarded as possibly in some way related to the "flu" infection of the past year, possibly indicating a condition which may give rise to another epidemic of more or less magnitude during the coming fall and winter seasons.

It is reported that a similar disease is quite prevalent in southern Wisconsin.

Epidemiologists of the Division of Communicable Diseases who have made a house to house canvass in certain of the communities most infected, report that there is a striking immunity on the part of those persons who suffered from "flu" during the recent epidemic. The clinical picture of these cases of so-called "summer flu" is almost identical with that of infectious colds which preceded the serious "flu" epidemic of last year.

The State Department of Public Health in view of the prevalence of these infectious diseases urges that all physicians shall report promptly to their local health officers the existence of groups of infected persons and urges that health officers shall make epidemiologic studies, particularly as to whether those persons sick at the present time suffered during the recent epidemic.

SO-CALLED "SWIMMING" FEVER.

Investigations made by the Division of Communicable Diseases of so-called "swimming fever" at Sidell, Virden, Auburn and Assumption, has led to the conclusion that the cases reported were probably those of the typhoid type of influenza. Some of these cases had been reported as paratyphoid, while others were reported under the vague term of "swimming fever." Unnecessary prevalence of diphtheria is causing field representatives of the State Department of Public Health to make investigations to determine why the death rate from diphtheria remains relatively high when the State had provided the means whereby the disease may be absolutely controlled. The diagnostic laboratories afford definite means of diagnoses and the State applies the "Schick test" to determine the immunity of individuals. The State also furnishes immunizing doses of anti-toxin for the protection of those exposed to the disease and curative doses for those who develop diphtheria. While diphtheria anti-toxin for the immunization of individuals is not furnished by the Department of Public Health at the present time, it is available from other sources and with the development of the new division of Biologic and Research Laboratories it is hoped that this valuable agent will be made available without cost to the medical profession.

INCREASED APPROPRIATIONS FOR THE DE- PARTMENT OF PUBLIC HEALTH

The Fifty-first General Assembly which recently adjourned, made provision for greatly increased appropriations for the State Department of Public Health as compared with any previous year. For the year 1919 there will be available approximately four hundred thousand dollars, or a total of \$786,000, for the biennium 1919-1920. The significance of these increases is made clear when it is known that in 1914 the total appropriations of the Department amounted to but \$50,000.

The more important additions to the personnel of the Department are, an assistant epidemiologist and additional district health officers for the Division of Communicable Diseases, a supervising nurse for the Division of Tuberculosis, a medical assistant, a clinical nurse, and an organizer of child welfare service for the Division of Child Hygiene and Public Health Nursing, a chief of the Division of Biological and Research Laboratories, a chief of the Division of Public Health Instruction, together with material increases in the clerical and field staff of all divisions.

Society Proceedings

CLINTON COUNTY.

The meeting was called to order by Vice-President Dr. H. B. Warren, New Baden, Ill., Aug. 12, 1919.

The minutes of the preceding meeting were read and approved.

Motions were made and passed that the following revisions in the fee bill become effective immediately:

1. Visit in town, day, \$2. Medicine extra.
2. Visit in country, first mile, \$2.50. Each additional mile, \$1.
- Bad roads and inclement weather—extra.
3. Visit at night—one and one-half times day visit.
4. Uncomplicated confinement cases, town, \$20. Uncomplicated confinement cases, country, \$25. Special visits—extra.
5. Forceps cases, \$10 extra.

A motion was made and carried that a committee be appointed to publish the readjustment of the fee bill in all the county papers. Also to have bills printed and to post same in the offices of all physicians in the county.

Dr. C. A. Powell of 928 N. Grand Ave., St. Louis, Mo., gave a good discussion on expert and general diagnostic methods of internal medicine.

Dr. J. W. Stewart, chief surgeon, city hospital, St. Louis, Mo., gave a good discussion on head injuries, methods of diagnostic value and course to pursue as to treatment.

Dr. P. Griesbaum of Lebanon was a visitor of the society.

Motions were made and carried that a vote of thanks be offered to Drs. Powell, Stewart and Griesbaum, for the great good contributed to the Clinton County Medical Society.

Breese was designated as the next meeting place, the meeting to be held there the second Tuesday in November.

DR. E. C. ASBURY.
Acting Secretary.

MADISON COUNTY

Our July Meeting

Beverly Farm, Godfrey, Ill., July 11, 1919.

Meeting called to order by the president Dr. C. R.

Kiser. In the absence of the secretary, Dr. J. A. Hirsch was appointed by the chair to act in his stead. Twelve members and twenty-six visitors present.

An excellent paper by Dr. Walter Baumgarten on "Lung Complications Other Than Pneumonia," was well received. The paper dealt chiefly with statistics compiled from reports from various army camps on these lung complications. The paper was discussed by Drs. M. A. Bliss and E. C. Ferguson.

A very instructive and highly interesting talk was given by Dr. M. A. Bliss, of St. Louis on "Some Psychoses." The speaker emphasized the necessity of a careful examination of all suspected cases of neurosis, psychosis and paresis, and the importance to the general public of making an early diagnosis in paresis. Disturbance in the function of the endocrine glands is sometimes a causative factor in epilepsy, neurasthenia, hysteria and the various psychoses. Hysteria frequently has an organic basis, such as brain tumors. Operative procedure and the administration of bromides was discouraged in the treatment of epilepsy. Colonization and kindly care give best results in these cases.

Dr. Bliss' talk was ably discussed by Drs. Geo. A. Zeller, W. H. C. Smith, Geo. A. Johns and F. M. Barnes, Jr.

An elegant repast was served by Mrs. Smith which was enjoyed by all present.

A vote of thanks was extended to Dr. and Mrs. Smith for their hospitality; and to Drs. Baumgarten, Bliss, Smith, Zeller, Johns and Barnes for their instructive and scholarly talks and discussions on the various topics. Dr. Hirsch as Treasurer of the Madison County Anti-tuberculosis Association, reported the receipt of \$45.00, as interest on deposits.

On motion meeting was adjourned.

OGLE COUNTY.

The Ogle County Medical Society met in Rochelle, at the Chamber of Commerce, April 16, 1919. President W. E. Kittler, of Rochelle, presided. Sixteen members present. Among the visiting physicians who were present were Dr. C. B. Brown, of Sycamore, Dr. J. H. Stealey, of Freeport and Dr. D. B. Penniman, of Rockford.

Senator Atwood, Stillman Valley, was the guest of honor and delivered a short address telling how they chloroformed the osteopathic bill in the Senate.

Election of Officers: President, Dr. W. E. Kittler, Rochelle; vice-president, Dr. J. C. Akins, Forreston; secretary-treasurer, Dr. J. T. Kretsinger, Leaf River; member of the Board Censors for three years, Dr. S. C. Thomson, Byron; delegate to state society, Capt. C. J. Price, Mt. Morris; alternate, Capt. Harry H. Davis, Monroe Center.

The program was particularly interesting and instructive due to the fact that the speakers were Ogle County men who had served in France during the world war. Capt. Harry Davis, of Monroe Center discussed at length his "Experience in his Work Abroad." Capt. Chas. Price, of Mt. Morris, gave an

instructive address on "The Treatment of Gun Shot Wounds." The discussion that followed the speakers was ably brought out and defended by Dr. Brown of Sycamore and Dr. Stealey of Freeport.

Capt. Davis and Capt. Price found in their experience the mortality among the English and French troops in the early years of the war who received severe wounds of the lower extremities was nearly all due to shock.

After the introduction of the use of the Thomas fracture splint the mortality was reduced to the minimum.

Dr. D. B. Penniman, of Rockford, on behalf of the physicians of Rockford, extended a cordial invitation to all members of the society to be present at the Tri-State Medical Association which convenes at Rockford, September 1. The program will consist of ten leading men of the country and eight leading men each from Iowa, Illinois and Wisconsin. Among the more prominent will be Gen. Leonard Wood, Bloodgood and Crile.

Light refreshments were served by the physicians of Rochelle after which the fee bill proposition was taken up.

The following communication was read by the Secretary.

Dear Doctor: At the recent meeting of the Illinois State Medical Society the subject of fees was discussed; it being the opinion that in many counties they have not been increased in proportion to the increase in the cost of living, and to give moral support in the counties in which it might be difficult to adjust the scale the following resolutions were adopted:

WHEREAS, the cost of medicines, instruments and everything else used by the profession has increased in proportion to the cost of living, and

WHEREAS, the cost of medical and surgical services has not increased in proportion to the above, be it

Resolved, that the House of Delegates endorses a general increase of fees over fees now in force to offset the above increase, and be it further

Resolved, that a copy of this resolution be given to the County Secretaries and published in the ILLINOIS MEDICAL JOURNAL.

Resolution: Moved by Dr. John that the Ogle County Medical Society consider favorably the letter from the State Medical Society in regard to the matter of increasing and unifying fees for professional service and that the chairman appoint a committee to consider the matter and report at this meeting. Motion carried.

The chairman appointed the following committee to report on the bill. Drs. McEachern, Davis, Beveridge, Griffin and Hanes. The committee reported on due consideration, after which a short discussion followed.

Motion made by Dr. Inks that we accept the committee's report amended by Dr. John that the County Society provide suitable cards for framing fee bills for office and that the report of the bill be printed in

all the papers of the county. Carried unanimously by rising.

The names of Dr. R. O. Brown of Mt. Morris, and J. F. Van Voorhis of Creston, were presented for membership.

Motion—Made by Dr. Akins, that the next meeting be held in Leaf River. Carried. Thus closed one of the best attended meetings the society has held for many years. All took a lively interest in the addresses, debates and discussions.

DR. J. T. KRETSINGER, Secretary.

FEE BILL

Adopted by Ogle County Medical Society at regular meeting, held at Rochelle, July 16, 1919.

	Minimum Fee
House visits within corporate limits (day).....	\$ 2.00
House visits within corporate limits (night)	
9 P. M. to 6 A. M.....	3.00
House visits—country (day).....	2.00
Mileage .....	.75
House visits—country (night).....	3.00
Mileage .....	.75
Attendance on small-pox; scarlet fever; diphtheria extra	1.00
Office consultation	1.00
Urinalysis (chemical)	1.00
Urinalysis (microscopical)	1.00
Vaccination, smallpox virus.....	1.00
Subcutaneous medication (vaccines and serums) ..	1.00
Consultation by telephone.....	1.00
Health and accident reports.....	1.00
Confinement, uncomplicated	20.00
Over 4 hours' attendance, extra fee will be charged.	
Confinement necessitating operative measures—	
minimum fee	25.00
Fracture of long bones—reduction and immobilization	25.00
Subsequent care and dressings extra.	

PIKE COUNTY.

The Pike County Medical Society met at Pleasant Hill, July 31st, 1919, with almost half of the total membership present. This is a live county society and has very few indifferent or inactive members. They take interest in the problems that confront the medical profession and try to keep posted by reading their Journals, attending their local and state societies, and where possible, take post-graduate work to keep step with the rapid, onward march of modern medicine. What else indicates so surely whether a society is a live one, or dead in its shell?

After a splendid chicken dinner, which the South-Pike men know how to give, the society met in the Baptist Church, and the scientific part of the program was given:

Dr. John McShane of Springfield took up the old, but ever-new problem of "Contagious Diseases and their Limitation." This was a paper presented by a specialist in his department, and many valuable hints

were gleaned that will bear fruit for the benefit of the physicians as well as the public.

Dr. C. E. Beaver, of Barry, then spoke of the County Tuberculosis Sanitarium. This county having voted for a tax to support such an institution, the Doctor appealed for the aid of the County Medical Society to assist in consummating this plan. There is no doubt but that the local society will help in all these beneficial enterprises for mankind's improvement. Such service is dignified, altruistic and humane, and elicits the best efforts of all.

The last paper by Dr. W. W. Kuntz of Barry was well received, on "Early Recognition of Tuberculosis." The subject was well covered, not only by the presentation of the gross appearances and symptoms, but also the microscopic and laboratory findings.

About four o'clock the society adjourned to the moving picture theatre, where Dr. Adkins of Springfield, presented the U. S. Government slides, treating of tuberculosis from every standpoint. These were very instructive and it is hoped that all county medical societies may avail themselves of the opportunity to view these films.

W. E. SHASTID, Secretary.

Personals

S. L. Thorpe, Capt. M. C., U. S. A., for the past year surgeon in charge of the Eye, Ear, Nose and Throat department, Department Hospital, Manila, P. I., has been discharged from the service and has resumed practice at Clinton, Illinois.

P. J. H. Farrell, Lieut.-Col., M. C., U. S. Army, lately in command of Base Hospitals Nos. 81 and 81a, A. E. F., France, returned to Chicago, Aug. 4. The family reunion included his sons, Capt. W. G. Farrell of the marines and Sergt. J. G. Farrell, late of the A. E. F. Dr. Farrell has resumed practice at 25 E. Washington Street, Chicago.

Dr. Frederick Christopher has returned from military service and resumed practice in surgery at 122 S. Michigan Boulevard, Chicago.

Dr. Charles R. Lockwood has returned from military service and resumed practice at Kankakee, Ill.

Dr. John A. Kappelman, Chicago, has been appointed full-time health officer of Canton, with a yearly salary of \$3,300.

Dr. Haldane Cleminson, Chicago, who recently was paroled from the state penitentiary, Joliet, was reinstated as a practitioner of medicine by

the State Department of Registration and Education at its meeting, July 25.

Dr. Gertrude Moulton, Urbana, has been appointed assistant health officer and advisory physician for women students at the University of Illinois, Urbana.

Dr. Alice Barlow Brown, Winnetka, has returned after twenty-two months' service in France.

Dr. Antony Biankini, Chicago, one of the founders of the Jugo-Slav National League of America and president of the league for several years, has been decorated by the Jugo-Slav government with the Order of St. Sava.

George G. Davis, Lieut.-Col., M. C., U. S. Army, Chicago, arrived in New York from France on the Northern Pacific, August 12.

Dr. Charles A. Johnson, Barry, has been commissioned captain, M. C., Ill. N. G., and assigned to the depot organization of the Eighth Infantry.

Arthur E. Gammage, Capt., M. C., U. S. Army, Chicago, has returned from overseas, and has accepted an appointment as acting chief of the bureau of hospitals, under the department of health.

The Ricketts prize of \$250, given by the University of Chicago each year to its students for the best research work in bacteriology, was divided between E. B. Fink and F. W. Mulson, both doctors of philosophy.

News Notes

—Failure to comply with the state law requirements by reporting a case of sore eyes in a baby is said to have resulted in Dr. Frank J. Zuehlke being fined \$25 and costs, August 5.

—In order to increase its capacity for the production of antipneumonia serum, the laboratory of which Dr. Preston Kyes, professor of preventive medicine in the University of Chicago, is in charge, is to be enlarged at a cost of \$5,000.

—Plans have been drawn for the Tazewell County Sanatorium for Tuberculosis which is to be erected on a site recently purchased in Mackinaw. The building is to cost about \$45,000.

—A new maternity hospital is to be built in Chicago, at Forty-Seventh and Mozart streets, by Archbishop Mundelein. It will be known as Misericordia Maternity Hospital and will house 100 mothers and 150 infants. The initial expense of the institution will exceed \$100,000.

—The Medical Women's Club, at its August meeting, elected the following officers: President, Dr. Grace H. Campbell; Vice presidents, Drs. Cecelia P. Kimball and M. Osborne Lichner; secretary, Dr. Adelaide M. Tyrrell, and treasurer, Dr. Emma H. Salisbury Peterson, all of Chicago.

—Dr. Thomas Roberts, said to have been at one time a well known physician of Chicago, was arrested, August 16, by federal agents, charged with violation of the Harrison Narcotic Law, and held in bonds of \$2,000. He is accused of having given narcotic prescriptions to drug addicts and of having himself made sales of habit-forming drugs.

—The McLean County Tuberculosis Sanatorium at Bloomington was dedicated with impressive ceremonies, August 17. The principal address was delivered by Dr. George T. Palmer, Springfield, president of the Illinois Tuberculosis Association. The sanatorium has been erected at a cost of \$50,000, and will accommodate 250 patients.

—The ninth lecture of the Graduate Summer Quarter in Medical Science at the University of Illinois, College of Medicine, was delivered, August 6, by Dr. Aaron Arkin, Ph.D., professor of pathology and bacteriology in the University of West Virginia, Morgantown, on "The Influence of Some Chemical Substances on Immunity Reactions."

—A postgraduate course of training in nursing is being held at the Illinois Training School for Nurses. The course lasts six weeks, with eight hours work each day for five days a week, and is being taken by eighteen women who hold executive positions in hospitals. Among the subjects are curriculum, planning of hospitals and nurses' residence, ethics of nursing and psychology.

—August 19, twenty-six officers of Northwestern University Base Hospital No. 12, held a

meeting in Chicago to form a peace-time organization to hold together the personnel of the unit which achieved such notable success in France. Payson L. Nussbaum, Major, M. C., U. S. Army, was elected president; Kellogg Speed, Lieut.-Col., M. C., U. S. Army, vice president, and Stanley W. Clark, Capt., M. C., U. S. Army, secretary-treasurer, all of Chicago.

—Mr. Robert Allerton of Chicago, July 30, offered to sell 1,200 acres of land and donate the proceeds to Piatt County if the supervisors would use the amount for the erection of a tuberculosis sanatorium. This offer, amounting to a donation of about \$400,000, was offered by Mr. Allerton as a memorial to his father, the late Samuel W. Allerton of Chicago, and his friend, the late John Phalen. The gift was formally accepted by the supervisors of Piatt County, August 2.

—The Paris-Chicago Hospital Foundation has been incorporated in Illinois with offices in the Marquette Building, Chicago. The officers and directors of the association are: president, Dr. Charles H. Johnson; vice presidents, Dr. Truman W. Brophy and Mrs. E. C. Thomas; secretary, Mrs. Milan H. Hulbert, and treasurer, Mrs. Archibald Freer, and the medical members of the board of directors are: Drs. Edmund J. Doering, William H. Wilder, Thomas J. Watkins and Lewis L. McArthur.

—A new hospital to be known as the State Surgical Institute for Children is to be built on the site of the baseball park at Lincoln and Polk streets. There will be three other hospitals on this site, the Illinois Charitable Eye and Ear Infirmary, a clinic for students of the Medical College of the University of Illinois, and the State Psychopathic Hospital. The land has already been bought for \$400,000 and more than \$1,500,000 has been appropriated to begin the construction of the hospital group.

—The Illinois State Department of Registration and Education has revoked the following physicians' licenses for the reasons given: Dr. Henry G. Meyer of Chicago for unprofessional and dishonorable conduct; Meyer at present is serving a sentence in the Cook County Jail on the charge of pandering. Dr. Joseph M. Moses for seeking to obtain money and practice in his profession under false pretenses; he was arrested for this in the spring of 1917 and was sentenced to eight-

een months in the penitentiary, and carried his case on appeal to the supreme court which, in June, 1919, sustained the action of the lower court; Dr. Moses is confined in the Joliet Penitentiary. He is said to have represented himself as an officer of the state board of health in connection with the case for which he was punished. Dr. John D. Young of Brookport, Ill., on the ground that he "is a person addicted to the use of morphin, opium, cocain or other drugs having a similar effect." Dr. Arthur L. Blunt of Chicago for unprofessional and dishonorable conduct in violation of the United States laws governing the use and dispensing of narcotic drugs. A previous action of the department revoking his license had been set aside by the court after the case had been carried to the supreme court of the state. Dr. Blunt at present is a prisoner in the federal penitentiary at Fort Leavenworth, Kan.

Marriages

THOMAS DYER ALLEN, Chicago, to Miss Florence Waring See of Hamilton, Ohio, July 21.

RICHARD AMBROSE ROCHE to Miss Ruth Wilkie, both of Chicago, August 6.

JOSEPH MICHAEL BLAKE, Chicago, to Miss Cecile Mary Schug of Moline, Ill., July 12.

WILLIAM C. SPANNAGEL to Mrs. Ella C. Nelson, both of East St. Louis, Ill., at Waterloo, Ill., July 1.

MINOR LEROY HARTMAN, Garden Prairie, Ill., to Miss Minnie Larish of Scranton, Pa., at Elgin, Ill., July 9.

WILLIAM HART ELMER, Rockford, Ill., to Miss Lenore Crompton of Beaconsville, P. Q., Canada, August 12.

Deaths

LAUREN A. STILLMAN, Chicago; Loyola University, Chicago, 1891; aged 62; died at his home, August 8, from arteriosclerosis.

SUMNER G. BERRY, Ashley, Ill.; Kentucky School of Medicine, Louisville, 1888; aged 52; died at his home, May 27, from accident.

JOHN LOUIS IRWIN, Chicago; McGill University, Montreal, 1897; age 59; died at his home in Maywood, Ill., July 31, from heart disease.

JOHN MARQUAND WAGNER, Newman, Ill.; Bellevue Hospital Medical College, 1878; aged 76; died at his home, June 10, from chronic diffuse nephritis.

WILLIAM DEADRICK NELSON, JR., Canton, Ill.; Rush Medical College, 1884; aged 62; a member of the Illinois State Medical Society; died at his home, July 28.

ELLEN ADELAIDE CURTIS RICHARDS, Streator, Ill.; College of Medicine and Surgery (Physio-Medical), Chicago, 1897; aged 51; a Fellow A. M. A.; died at her home, July 8.

ALGERNON M. SARGENT, Lincoln, Ill.; Medical College of Ohio, Cincinnati, 1880; aged 62; a Fellow A. M. A.; a director in the Lincoln National Bank; died at his home, August 3.

LYELL J. LESCHER, Mount Carmel, Ill.; Jefferson Medical College, 1877; aged 62; a member of the Illinois State Medical Society, died at his home, July 21, from ulcerative endocarditis following influenza.

EFFIE A. CURRENT, Danville, Ill.; Medical College of Indiana, Indianapolis, 1901; aged 44; at one time coroner of Kearney County, Neb.; died at her home, June 11, from tuberculosis of the lungs.

TOWNSEND SEELY CARPENTER, Hinkley, Ill.; Northwestern University Medical School, Chicago, 1892; aged 54; a member of the Illinois State Medical Society; died at his home, July 8, from carcinoma of the stomach.

MARY ELIZABETH STANFORD, Chicago; Chicago Physio-Medical College, 1897; aged 53; professor of physiology in the Chicago College of Medicine and Surgery; died at her home, August 14, from myocarditis.

THOMAS HAGARTY, East St. Louis, Ill.; St. Louis College of Physicians and Surgeons, 1896; aged 64; a member of the Illinois State Medical Society; was run over and killed by an interurban car in East St. Louis, August 14.

FRANKLIN HARMON GODFREY, Bloomington, Ill.; Miami Medical College, Cincinnati, 1877; aged 71; a Fellow A. M. A.; president of the McLean County Medical Society from 1900 to 1902; died at his home, August 8, from cerebral hemorrhage.

OLIVER PERRY BRITTIN, CAPT., M. C., U. S. ARMY, Athens, Ill.; Barnes Medical College, St. Louis, 1906; aged 35; a Fellow A. M. A.; secretary of the Menard County (Ill.) Medical Society in 1914; who recently returned from overseas; while driving over a grade crossing near Springfield, Ill., in his automobile, July 2, was struck by a train and instantly killed.

OTIS JOHNSTON, Quincy, Ill.; Chaddock School of Medicine, Quincy, Ill., 1889; aged 52; a member of the Illinois State Medical Society and for several terms president of the Adams County (Ill.) Medical Society; local surgeon for the Burlington and Quincy, Omaha and Kansas City railroads; surgeon in charge of St. Mary's Hospital, Quincy; died at his home, July 21, from heart disease.

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Original Articles

EMPHYEMA AS ENCOUNTERED IN THE ARMY.*

E. WINDMUELLER, M. D.

WOODSTOCK, ILL.

Lately Major, M. C., U. S. Army

This paper is not intended to be a treatise on empyema but simply a short, concise rehearsal of our experience with this disease at Base Hospital, Camp Sherman, during 1918 and '19, as well as at Base Hospital 88 at Savenay, France.

Over 150 empyema cases furnished the basis of our conclusions and the men doing this work were close observers of mature judgment who had long experience with this disease in civil life.

I am aware there will be considerable dissension from our final verdict, as I knew many good men in this district in pre-war days who were ever opposed to it.

Civilian physicians who were in the service as Base Hospital surgeons during the winters of 1917, 1918 and 1919 were greatly impressed by the severity of all diseases of the respiratory tract.

Bronchitis, broncho and lobar pneumonia were of a more severe nature and hence had a higher mortality than we had encountered in civilian life.

The pneumonias were followed by more complications than was usual in civil practice and empyema, pericarditis and endocardial disease as well as various arthritides were relatively common.

This status prevailed not because we had a new disease to deal with but because of a generally lowered resistance of the soldier due to overcrowding, frequent exposure to all kinds of infections and the mental state of the new recruit.

A large percentage of the stricken soldiers were new arrivals in camp, they had just received their

anti-typhoid inoculation and the often severe reaction following this had lowered their resistance.

Yet others arrived in camp suffering from the after effects of a prolonged farewell debauch and many of these men were ready victims to the ever-present pneumococcus.

We medical officers from civilian life were at first not greatly disturbed by the presence of empyema, as we had always considered an operation an almost infallible cure, and it was not until the first few cases promptly died that we saw the gravity of the situation.

However, not a single case died of simple uncomplicated empyema, all cases that came to autopsy showed other septic conditions such as pericarditis, pulmonary abscess, endocarditis or general sepsis.

The influenza epidemics of 1917 to 1919 were really not a true influenza, as the laboratory reports showed the absence of the Pfeiffer bacillus in the vast majority of cases, but the pneumococcus and the streptococcus were usually associated.

Hence it was not surprising that pneumonia and empyema were a common sequel to influenza.

Thirty-three per cent. of the population of the camp in the fall of 1918 developed influenza; of these 18 per cent. developed pneumonia and the mortality of these latter was 42 per cent.

Cultures obtained at autopsy from the exudates and blood from heart and lungs showed the pneumococcus type present in 53 per cent.; type 3 in 25 per cent. and streptococcus hemolyticus in the balance of the cases.

The streptococcus hemolyticus was often associated with the pneumococcus in the chest effusions.

The diagnosis of a well pronounced empyema rarely presents any difficulty but interlobar, mediastinal or other unusually located empyemas may sometimes baffle our diagnostic ability and

*Read at the meeting of the Tri-State District Medical Society, at Rockford, September, 1919.

here the clinical signs, physical findings, the fluoroscope, blood picture and the diligent and rational use of the aspirating needle will finally solve the problem.

A description of the treatment of empyema in the Army would fill a book. The terrible mortality encountered in the early history of operative intervention led many to believe that we were dealing with an entirely different disease than we had known in civil life and so the old established operation of rib resection was thrown aside and other methods substituted.

Each author claimed wonderful results for his particular mode of treatment or operative measure but in retrospect we see only the truth of the old surgical axiom that pus under pressure must be promptly and efficiently drained.

In the early months of 1918 at Base Hospital, Camp Sherman, simple intercostal incision was done under local anesthesia, and the cavity irrigated with Dakin solution according to the latest methods of Rockefeller Institute and by a competent man fresh from that institution.

These patients did well for a short time, the pus lost its purulent character, the bacterial count dropped and the patient apparently improved. Later the wound looked irritated, hyperemia extended over the chest and the patient simply went to pieces. The mortality of this group of cases was 68 per cent.

Later rib resection was done under local anesthesia followed by typical Dakin treatment and the results were little better.

The medical service lost faith in the surgeon and tried frequent aspirations and a few patients improved temporarily under this treatment but none were cured. Instillation through the aspirating needle of 2 per cent. formalin glycerine was added to aspiration and a few men of the medical service became enthusiasts, but for a short time only, for the end results were a disappointment.

Where then lay the fault? Why the high death rate?

A commission of both medical and surgical services was appointed and after due deliberation came to the conclusion that there was a proper time for operation and this was the period immediately after the subsidence of the pneumonic process.

It was learned that patients aspirated before

the pneumonic process had subsided, frequently had a decided relapse and that the presence of fluid in the pleural cavity acted as a splint to the affected lung. Later results proved that the best results were obtained where the patient was drained between the 12th and the 24th day.

Following the rules laid down by this commission the mortality was greatly reduced and though other methods advocated were tried out the following procedure gave the best permanent results.

When the medical service pronounced a patient recovered from pneumonia and the presence of pus was definitely established in the chest he was turned over to the surgical service.

Just before operation the exact location of the pus was determined by needle and often the x-ray, a rib resection was done under the angle of the scapula if possible and a generous section of the lowest possible rib removed.

This was done in every case under local anesthesia and the following technique was found very practical:

The area of operation was injected with a one per cent. novocain solution down to the rib, the incision made down to the periosteum, the soft parts well retracted and a one per cent. novocaine solution injected into the periosteum through a heavy dental syringe in sufficient quantity to dissect the latter from the rib by hydrostatic pressure.

Very little dissection of periosteum was then necessary to free it from the rib and a rib shear promptly finished the operation with little or no pain.

This procedure produced no more pain or shock than simple intercostal incision and gave better drainage.

Two large size drainage tubes were inserted securely stitched together and well fenestrated.

The patient then received an intravenous injection of 50 c.c. of a 25 per cent. solution of sterile glucose and after the third day 100 c.c. of a 50 per cent. solution into the pus cavity.

These injections were repeated every other day.

There was marked improvement of most patients after following this method and the better end results justifies its employment. There is a marked rise in leucocytosis after the use of the glucose and this probably increases the resistance of the patient.

Later, in France, where I did considerable work in empyema, this method gave the most gratifying results.

Irrigations with strong chemical antiseptics were not only useless but usually harmful besides entirely unnecessary.

The methods used in this series of cases were: Rib resection with typical Carrel-Dakin treatment, Mzingo's method of aspiration and Dakin injection, intercostal incision with Dakin treatment, multiple simple aspiration, continuous hydraulic aspiration, frequent aspiration with formalin glycerine injection, rib resection with formalin glycerine irrigations and, finally, above described method.

Breathing and blowing exercises were practiced by all convalescent patients to aid in lung expansion.

CONCLUSIONS:

Empyema as it occurred in the Army is but one element in a severe pneumonic infection to which in many cases the streptococcus has been added.

The presence of fluid in the pleural cavity during the active stage of the pneumonia acts as a splint to the diseased lung and should not be removed at this time.

If the patient survives the pneumonic process and the fluid becomes purulent, rib resection done at the most dependent part of the abscess cavity gives the best permanent results.

Dakin's solution or any other strong chemical irrigation was universally condemned by all members of the commission as not only useless but positively harmful, as it was found that a firm pyogenic membrane was produced by them which prevented proper expansion of the lung.

Intravenous injections of glucose solution were considered a valuable adjunct to good drainage.

they each take every known precaution to avoid accident and still I have seen two patients where the operation had to be stopped and considerable time spent to resuscitate the patient from a serious shock, due to the anesthetic.

H. Meuriat and O. Platon¹ expatiate on the advantages of spinal anesthesia in war surgery, but add this precaution: "Of course, the anesthetic is a poison and those whose livers and kidneys show that they are unable to counteract the poisonous effect of the anesthetic should be excluded from spinal anesthesia."

Dameno² reports four cases of temporary paralysis of the external rectus muscle of the eye. He refers to 80 similar cases on record, but says they all retrogressed spontaneously.

Babcock,³ with an experience based on over 5,000 cases, says: "Spinal anesthesia requires a more highly developed technic and a greater degree of watchful supervision than does the use of ether." He closes his article with the statement "spinal anesthesia is relatively safer in the young and robust than in the enfeebled and toxic." His whole article is well worth the study of any one using spinal anesthesia, as also is the article on this subject by Boyd and Yount.⁴

Reporting 6,229 cases of spinal analgesia, done by twenty-seven different physicians in the Government Hospital of the Republic of Panama, they say: "The majority of our patients are West India negroes and Panamanians of the poorer classes of low mentality and are by no means neurotic in tendency. They submit to operation with a minimum of mental distress. These factors are of great importance in this method." Of drugs they say:

In the beginning, many different drugs were tried both separately and in combination and with the addition of strychnin and epinephrin. We have obtained the most consistently good results with the following preparation, so that we now use it exclusively: Ampule

	0.5 c. c.	1 c. c.
Stovain	0.05 gm.	0.1 gm.
Sodium chlorid	0.05 gm.	0.1 gm.
Distilled water	0.5 c. c.	1 c. c.

RESULTS

Failures. We are unable to give a statement of the percentage of failures for the entire series because the records are not complete in this respect. Following all cases for a period of three months in the present year we note the following:

In 226 consecutive cases injected by one having had a large experience in the method, there was one com-

SPINAL ANESTHESIA IN GENERAL AND GENITO-URINARY SURGERY.*

G. W. GREEN, M. D.,
CHICAGO.

I have seen Dr. Babcock of Philadelphia, Prof. Bastinnelli of Rome, Prof. Kocher of Berne, Prof. Wertheim of Vienna, operating with spinal anesthesia. All of these men have had considerable experience with this form of anesthesia and

* Read at the Sixty-ninth Annual Meeting of the Illinois State Medical Society, May 21, 1919.

plete and one partial failure, about 0.8 per cent. In 479 cases injected by six different physicians there were sixteen complete failures, nine partial failures and four repeated injections, about 6.25 per cent. failures.

Unfavorable Features During Operations. On three occasions it has been necessary to stop the operation temporarily on account of respiratory failure. Artificial respiration was begun and continued in each case until the patient was able to breathe. In one of the cases it was necessary to continue the artificial respiration fifty minutes. All three patients recovered and the operation was completed in each case without a general anesthetic.

After Effects. Mild headache and backache occurred in about 20 per cent of the cases. They yield readily to the usual headache remedies. The severer type of headache associated with vertigo, severe backache, stiff neck, etc., is much less frequent. In our wards it occurs in about 1 per cent of cases. It is due to slight hemorrhage into the subarachnoid space from faulty puncture.

Temporary loss of vesical control is fairly frequent following operations on the rectum and perineum.

One patient developed a marked degree of mental derangement which lasted fifteen days, after which she recovered completely. She had undergone a pan-hysterectomy.

Deaths. There have been four deaths in which spinal analgesia has been a factor. In only one did it seem to be the sole cause of death.

Conclusions. Special skill is required for the successful use of spinal anesthesia, particularly in its selective field when it is chosen as the least dangerous anesthetic in desperate cases.

In the hands of such skilled men as Drs. Nagel and Thompson in the limited field they have so ably outlined, I am confident that this is a valuable anesthetic, but those of us who are not so skilled would do well to carefully study the work of the men cited and especially note their warnings and contraindications.

REFERENCES

1. Paris Med. Journ., Dec. 27, 1917, VII, No. 51.
2. Journ. A. M. A., July 6, 1918, LXX, p. 77.
3. Journ. A. M. A., Oct. 11, 1913, p. 1358.
4. Boyd & Yount, Jour. A. M. A., Feb. 24, 1917, p. 601.

4654 Sheridan Road.

SOME OBSERVATIONS ON CONGENITAL SYPHILIS.*

ROBERT KROST, M. D.
CHICAGO.

Congenital syphilis can conveniently be divided into the early, the late and the so-called latent form.

The first two of these groups must be again divided: Early syphilis into embryonal, fetal and infantile types; late syphilis into late manifestations of a previously active syphilis and those cases which only appear late in childhood or in adult life without having shown signs before.

Of the embryonal type of syphilis I have no practical knowledge and of the fetal, which includes syphilis in the newborn as well as in the stillborn infant, but little, as the cases from which I have made my observations—one hundred and twenty-seven in number—are mostly from the Pediatric clinic at Northwestern Medical.

Most of the cases of fetal syphilis are born dead and may or may not show signs of syphilis externally. If they do a maceration of the skin or a pemphigoid eruption is apt to be present. The diagnosis in these cases is best made at autopsy.

Of the cases born alive with signs of syphilis a pemphigoid eruption is occasionally present. This eruption differs from the so-called pemphigus neonatorum in having a more infiltrated base with more inflammatory reaction and by not showing the same tendency to rapid spreading. Rhinitis is present frequently and at times there may be a papular eruption but more frequently the characteristic thickening of the skin over the palms and soles is present.

In the infantile type the signs of syphilis appear in the majority of the cases during the first three months—most of them show lesions during the first month. The time at which the lesions appear having in most cases a definite relation to the severity of the infection, the earlier the lesions appear the more severe the infection.

The first symptoms to appear in most of my cases was the snuffle. Because of the frequency of head colds in infants only those cases were classified as luetic snufflers where the snuffles had persisted for a number of weeks and was accompanied or followed by other symptoms. Snuffles is at first usually dry, later it becomes serous and then muco-purulent or bloody. The sides of the nose and upper lip are frequently excoriated; the formation of crusts in the nose together with the swelling at times render nasal breathing almost impossible. I recently saw such a case that had had two operations for adenoids

*Read at the 69th Annual Meeting of the Illinois State Medical Society, at Peoria, May 22, 1919.

without relief clear up promptly under mercury. If untreated this process in the nose may go on to destruction of the cartilaginous septum and the bones of the nose and we get the typical deformities, buck nose and saddle nose.

Next to snuffles the eruption was the most frequent initial symptom. The character of the eruption varied as to extent and form. Only occasionally have I noted the occurrence of the types of eruption found in acquired syphilis. I can remember having seen but one macular eruption. The maculo-papular eruption was rarely found alone and the pustular was not seen. The papular form in infants is more apt to ulcerate and macerate and coalesce due to the tender skin of the infant and also to the moisture present; this was especially noted in the diaper region.

The typical skin lesions of congenital syphilis are not, however, these lesions mentioned—there are other lesions peculiar to congenital syphilis and found much more often. They appear as circumscribed or diffuse infiltrations of the skin found often around the mouth, forehead and cheeks, but more especially on the soles of the feet and the palms of the hands and in the gluteal region. The skin of the affected area feels slightly thickened and stiff—it is shiny as though varnished over. The color depends somewhat upon its location; on the hands and feet it is dull red or reddish brown, on the face frequently the color of a cigarette smoker's fingers. These affected areas are at first smooth, later they may desquamate after first showing irregular fissures. The skin frequently peels off, especially on the palms and soles and this process may be repeated.

We may also have ulcerations, especially around the moist surfaces and those that come in contact—mouth and diaper regions. The ulcerations around the mouth often take the form of linear ulcers which involve the mucous membrane and extend up into the skin margin. These ulcers, when deep, leave permanent scars which are very diagnostic of congenital syphilis. In the gluteal region where the thighs rub together superficial ulcers often occur and the whole area of red, thickened skin, resembles intertrigo.

The hair of the scalp and eyebrows is often dry and sparse and comes out easily; alopecia may occur. The nails shows many changes. They are

often brittle and break easily. Paronychia dry or ulcerative may occur, irregularities are common and the nails are often shed a number of times. Some years ago Dr. Brenneman called my attention to the large number of syphilitic infants who had peculiar shaped finger nails. The nails appear narrow and are pinched in laterally, coming almost to a point at the tip; the whole nail looked at from above being very convex. I have seen this condition of the nails present in two Mongolian idiots, but never in any other condition but congenital syphilis and I believe it to be a valuable point in diagnosis.

The mucous membranes show the linear ulcers I have mentioned around the mouth, these also appear around the anus. Mucous patches are found in the mouth, but not as often as in acquired syphilis. Condylomata are quite rare during infancy. Marked changes must occur in the larynx although I have been unable to see the mucous membrane; a great many of these babies have a hoarse voice, one case had complete aphonia. The glands are always involved, practically all of the external glands were palpable and I found either one or both epitrochlear glands involved in every case.

The blood frequently shows a secondary anemia, at times very severe, one case showing a red count as low as 1,700,000, Hg 35 per cent, and white cells 24,000, with a normal relation of the white cells. This case cleared up quite promptly on treatment.

Changes in the long bones are not very common in the infantile type. Three babies had a diffuse swelling just above the elbow—one just above the ankle, and in one the lower end of both the humerus and tibia were involved. These swellings were painful to touch—a great deal of pain was present on motion. These swellings were of rapid development and two of them broke down and discharged before treatment could arrest them. There was, however, no permanent deformity. No temperature was present in any of them which helped distinguish them from an ordinary abscess. They were undoubtedly cases of Wegner's osseous-chondritis. Besides these cases with swelling there is a condition relatively frequent—7 cases—of pseudo-paralysis. The oldest infant showing this condition was two months of age, the youngest five days. The mothers came with the same history

that the child had been normal in every way up to a certain date, they then noticed that there was pain on motion, both active and passive, and that in two or three days the baby would no longer move the affected limb. On examination these babies show the ordinary signs of syphilis—glands, spleen, etc.,—with a rigidly-held arm or leg which is tender to pressure and extremely painful on motion, no swelling is present and in three cases where I obtained fine x-ray pictures no lesion in the periosteum could be demonstrated. I believe that the periosteum is involved though it may be the muscle that is affected. A week's treatment with mercury relieved all symptoms of pain and paralysis.

In the flat bones spots of softening were relatively common (cranio-tabes). Some of the babies showed excessive formation of bone in the parietal and frontal regions; two cases showed the bony hypertrophy along the sutures.

In the viscera the most frequent change was found in the spleen, which was enlarged in about 80 per cent of the infantile cases. The enlargement is usually not marked but at times was very much so. Under four months an enlarged spleen usually means syphilis or tuberculosis.

Enlargement of the liver was frequent, but means little because so many things cause enlargement in babies. The lungs showed nothing in my cases that I could ascribe to syphilis. Three of my cases had congenital heart lesions, a proportion a little too high to be a single coincidence. Two cases showed an enlargement and hardening of one testicle.

Changes in the nervous system are not rare, even during infancy, though not as frequent as later in life. Thus, in twelve cases, a noticeable bulging of the anterior fontanelle was present, due to varying degrees of hydrocephalus. One of these cases had a marked opisthotonos and generalized rigidity, with increase in the spinal fluid pressure—convulsions were present. The whole picture cleared up on large doses of mercury.

Brain hemorrhage occurred in one baby at nine months of age and the child, now nine years old, is a typical hemiplegic. A history of repeated convulsions was obtained in four cases, but two of these babies also had marked rickets, so that convulsions have not seemed an important symptom.

The special senses are not affected as often during infancy as later. In a few cases I have seen chronic otitis media with a history of sudden onset during the early weeks of life. The eyes during infancy in my cases have shown nothing.

Generally these babies are backward physically, mentally most of them seem quite normal during infancy. An infant with congenital syphilis is usually hard to feed even on the breast and on the bottle they are often severely marasmic for long periods. In thirty-eight cases under one year where the weight had been recorded only four were up to normal weight for their age, the remainder were from one to eight pounds under weight. Even under energetic specific treatment and the most careful feeding the gain was slow or there was even a loss. The resistance of these babies is very poor; they are always sick and the mortality from the ordinary diseases of infancy is high.

Late Congenital Syphilis: In considering the manifestations of late syphilis we note first the comparative rarity of skin lesions. Two main forms occur, the small and large nodular syphilide, though in the first few years after infancy I still found the ordinary lesions. The large nodular syphilide is probably a skin gumma; it breaks down at times and leaves a ragged ulcer with indurated edge which is very hard to heal.

The mucous membranes in late congenital syphilis are frequently affected, condylomata are more frequent than during infancy; one case had condyloma like masses all over the anterior part of the tongue. The mucous membrane of the throat, larynx and nose are often affected. Gummatous processes in these regions break down and form large ulcers on the soft palate or tonsils. I have seen recently one tonsil and part of the pillars destroyed in this way.

The glands, even in the well-treated cases, show some hypertrophy and in untreated cases may show marked hypertrophy as in one case—Joe C., 12 years old, who came to the clinic with a diagnosis of tubercular glands of the neck of many months' standing. The glands formed a collar around his neck and looked like Hodkin's disease. He gave a positive Pirquet but more important a positive Wassermann, which was made because of an old keratitis.

Within a month after specific treatment was begun the swelling had disappeared.

The bones are frequently affected in late hereditary syphilis, either by gummata or by a hyperplastic osteitis or periostitis or both. These changes are most often found in the tibia, though they may be found in any of the bones. My four cases affecting the tibia showed varying degrees of swelling with roughness of the bones, both tibia were affected in two, one a case of long standing had only a thin shell of the tibia remaining, this was sharp and bent and gave the typical saber-sheath deformity. In the acute stage a great deal of pain and tenderness are present and walking is difficult. Gummata of the clavicle and fingers were also observed. Both knee joints were affected in two cases with marked swelling but very little pain; one of these cases could not walk because of the deformity present.

In the viscera, gummata appear most often in the liver; at other times the liver becomes enormously enlarged and shows no roughening or nodules, as in a colored boy, four years old, who came complaining of pain in the right upper quadrant. The liver edge was below the umbilicus. There was tenderness on pressure but no nodules or roughening. Two other cases showed the same symptoms, all gave Wassermanns and cleared up promptly under treatment.

To me the most interesting changes in late congenital syphilis were in the nervous system. These changes, as in the infantile form, may be due to changes in the blood vessels, to diffuse sclerosis or to gumma formation.

Some form of nervous disorder is frequent; it may be only excessive nervousness, at times choreic in form, it may be migraine or epilepsy.

I have under observation at present two children, one seven, the other twelve, with Argyll-Robertson pupil and absent knee jerks. Neither has the tabetic gait nor is the Rhomberg present.

Three cases of juvenile paresis have come under my care during the past ten years; all of them give about the same history, though the time of onset varied. They were all normal in their early development—none had any infantile symptoms of syphilis that the mothers could recall. One patient, a girl, first showed symptoms

at 4½ years; another girl at five years, and one case, a boy, first showed symptoms at 6. Because of the marked similarity in histories I will only give the history of one case.—
Geo. L.

He became a patient at the dispensary when eight years old and gave the following history. Mother states he was a full time baby, no birth injuries, developed normally, talked well at two years; walked well at a year and a half; no eruption; no snuffles; never sick. The boy seemed all right until nearly six years old when his disposition changed; he cried more easily than before and laughed more—"became silly acting." When he was six years old he had a series of convulsions for three weeks. The mother noticed at this time an inequality of the pupils and a slight photophobia. The gait became peculiar about this time and he has had increasing difficulty in walking until now he falls frequently. His mentality has gradually weakened and he cries most of the time.

On examination the boy has the overhanging forehead, a suggestion of saddle nose; his upper central incisors are not notched but are peg-shaped; his other teeth are peg shaped and deformed. His external glands are all palpable. There are no scars on cornea, but the left pupil is very large and fixed. Reaction to light gone. His right eye reacts to accommodation. His coördination is much impaired; he is very clumsy in fine movements; his gait is spastic and the boy falls after walking a few steps. The knee reflexes are exaggerated. The spinal fluid gave a reaction. The cellular count was increased. Two of these children are now after five years bedridden and absolute idiots. The third I have lost track of. It is interesting to note that in these three cases of juvenile paresis the ordinary symptoms of congenital syphilis have been lacking. In congenital syphilis as in the acquired form the Spirochete seems to pick out special tissues.

From the sixth to the tenth year deafness may come on, it is a nerve deafness and does not respond to treatment. About this time too we find changes in the eyes, an interstitial keratitis having been the most frequent late sign seen, one or both eyes may be affected and these cases if neglected lead to permanent blindness because of corneal opacities.

Latent Cases: The latent cases are, of course, not recognized in most instances, we rather guess at them than diagnose them. In a clinic where every child is suspected of having syphilis until proved otherwise—even where the Wassermann is negative, we often give small doses of mercury with evident benefit. We often have the feeling that some obscure condition, some peculiar clinical manifestation is syphilitic and treat the child accordingly.

As to the probability of signs or stigmata of

syphilis in the third generation I have seen no evidence of a real infection. That many of the children of the third generation are below par in many ways I think is beyond question.

In conclusion a few words on the stigmata of congenital syphilis:

1. Hutchinson's triad.

(a.) The two upper central incisors of the permanent set are notched and peg shaped, the notch being cup shaped—many varieties occur—and all of the teeth may be involved, the molars having the cusps more definitely marked.

(b.) Nerve deafness.

(c.) Interstitial keratitis.

2. Scars: Lineal scars around the mouth, arranged in a radial manner.

3. The Facies: The forehead is prominent, bulging or overhanging; the bridge of the nose is sunken giving the buck or saddle nose. Many of these children look alike—so much so that I often mistake one for the other.

DISCUSSION.

DR. JOSEPH BRENNEMANN (Chicago): In what I have to say I will speak only about congenital syphilis. Dr. Krost has given us a very comprehensive and admirable paper on the symptomatology of congenital syphilis. Dr. Krost and I have worked side by side for a good many years so that I haven't very much to add to what he has said.

It seems to me, however, that one might pick out in a sort of proportional sense the individual symptoms one ordinarily sees more than he has done in his paper—which would not be possible there. Now the thing that strikes one who works with congenital syphilis and sees practically no acquired syphilis—is the utter difference between congenital syphilis and acquired syphilis. The non-pediatric physician thinks of children and babies in terms of the adults and they are apt to do that with reference to syphilis. Now the two diseases have almost no symptom in common. There are only a few. With the adult we think of the primary lesion, the secondary symptoms, the gumma, the tertiary lesions, and so forth. In the infant we have no primary lesion, or if we have, we don't know where it is; the secondary symptoms are not the same as in the adult; mucous patches are almost absent. The secondary symptoms, if one can call them such, are entirely different from what they are there, and the gumma is a relatively unimportant thing.

If one thinks of congenital syphilis in the way in which I spoke of it a moment ago as to the relative value of different symptoms, as they strike one who sees a great many cases of congenital syphilis, I am over and over impressed with the fact that the most important symptom of congenital syphilis, and one

that has a great deal of diagnostic value, especially in getting the history, is absorption on the part of the mother. We rarely see a case of congenital syphilis that lives in which there has not been at least one miscarriage and commonly two or three and even seven and eight miscarriages that have preceded that.

In getting the history from a mother who usually brings the baby to us, and where we don't want her to know what we are driving at, where we want to get the history whether there is syphilis in the family, the most important question that we can ask is in a roundabout sort of way, whether she has ever had miscarriages or not, and if she has had a miscarriage or has had several miscarriages, that adds strongly to the probability that this child has congenital syphilis.

The most frequent symptom, I think without doubt, is the snuffle, not that every snuffle means congenital syphilis. There are lots of snuffles, but congenital syphilis hardly occurs without a snuffle. It is almost invariably present.

Among the characteristic symptoms, I mean the symptoms that are valuable from a diagnostic standpoint, there are a few that to me always stand out prominently. One of them is a peculiar expression, a peculiar contour of the face, the syphilitic face which occurs in perhaps less than a third of the cases. They have a sort of a square-round head, with the top of the head and forehead rather prominent, nose rather depressed, whole face rather flat. After one sees a number of them, one can recognize it very readily.

Another symptom that to me is of a great deal of interest is the presence on the palms of the hands and the soles of the feet of lesions that do not occur, so far as I know, in acquired syphilis. There is a slight induration, a sort of a reddish brownish, glossy, lacquered appearance as though the skin had been freshly varnished, and there is usually coarse desquamation. That occurring on the palms of the hands and the soles of the feet in the first few months of life is diagnostic of congenital syphilis.

Closely associated with that and usually occurring in those cases, probably etiologically connected with it, is that change in the finger nails that was spoken of, where the finger nails are laterally pinched and often bent down at the ends, which makes it possible from one finger nail to say that a child has congenital syphilis, unless one wants to exclude Mongolian idiocy in which the same thing fairly frequently occurs.

In congenital syphilis more than in almost any other sickness, we have a number of pathognomonic symptoms. We like pathognomonic symptoms in anything—something that we can say "this is it." In congenital syphilis there are a number of those. The face that I spoke of is one. The nails are another. The Argyll-Robertson pupil which occurs in some of the late nervous manifestations that were spoken of, is a third. The soles and palms that I spoke of constitute still another. Linear scars, radiating out from the mouth in all directions that persist throughout life are also a manifestation of Lues. Interstitial keratitis is another. Hutchinson's teeth are another. All of these are practically pathognomonic symptoms of congen-

ital lues. I think the Wassermann reaction ought to be considered purely as a symptom of the disease. Dr. Krost hardly mentioned it among the symptoms or among the diagnostic aids. I think he and I both belong to that older school perhaps who still believe that what you see and feel and hear and smell about cases—that the diagnostic acumen that you acquire from that method—is of greater value than what a laboratory can tell you from a blood test with reference to this and also a good many other things. (Applause.)

DR. DOAN (Macoupin): In the case of a child which has given spinal positive reaction, has Dr. Krost been able to get any results from the mercurial treatment?

DR. KROST (Closing discussion): In answer to the last question, in the cases that gave a positive Wassermann and spinal fluid, there have been no results from treatment, either arsenical preparations or from mercury. There has been a steady downward course in these cases.

I didn't have time to mention anything about treatment. The cases were almost all treated with mercurial rubs or grey powder. In the older cases especially, where we got very poor results after long treatment with mercury in different forms, both the rubbings and the grey powder, were given salvarsan and we got very, very much better results than with the mercury.

Talking of gastro-intestinal symptoms, I haven't been able in any of the cases to definitely say that gastro-enteritis, the ordinary cases of vomiting, colitis in infants and young children, was due to syphilis. Some of them may be, but they showed no signs, and, as I say, I had very few Wassermanns made on any of the other cases. Perhaps if I had more Wassermanns made on some of the cases of colitis and gastric irritation in young children, I would get positive results as in the adult cases.

THE WORK OF SELECTIVE SERVICE BOARDS OF THE UNITED STATES IN THE GREAT WAR—OUR POST-WAR OBLIGATIONS*

S. M. WYLIE, M. D.

PAXTON, ILL.

On April 6, 1917, our country, to her everlasting honor, declared war against the Imperial Government of Germany. That day America was reborn and found her American soul. It will remain, as long as time shall last, the birthday of a new American aristocracy to which belong the boys in khaki, the boys in navy blue, and the marines in forest green, the new Continentals,

who preferred death to Prussian slavery. Peaceful America that day threw down the gage of battle to the Hun and became fighting America; her man power, and woman power, and money power and all her mighty forces were mobilized for war; a conquering, invincible force that turned the tide of battle at the most critical hour of the conflict and saved to the world human liberty.

Our late entrance into, and lack of previous preparation for hostilities necessitated haste if we were to become the decisive factor in saving our allies from annihilation, as they were fighting in the last ditch. One of the first and most important of the thousands of things necessary in preparation, was the selection of our combatant forces. We were to fight the best disciplined and the most efficient army the world had ever known. To meet it, our soldiers must be selected from the strongest of our young manhood, who could stand the physical and mental strain of intensive training and be inspired to make up in courage and initiative what they lacked in military preparation to meet such a foe. The exigencies required an inventory of our national asset in military man power before they could be trained and in order to do this, our youth from twenty-one to thirty years of age were called upon to register at their respective voting places the 5th of June, 1917. Later the prospect of a long struggle seemed so certain that the age limit was lowered to eighteen years of age and increased to forty-five, a necessary measure for raising the largest army possible. So-called Exemption Boards were selected from among civilians on recommendation of the governors of the various states and appointed by the President, whose duty it was to select and induct the men into military service. The Boards took the same oath and solemn obligation for loyalty and obedience to the mandates of their superior officers that was required of the man in uniform. Their services, with few exceptions, were given as a patriotic service, without any compensation whatever. In the few instances where compensation was accepted it was not sufficient to meet the incidental expenses of travel to attend the frequent conferences to which they were summoned. This statement is made to correct a prevalent opinion, erroneously given out by part of our press, that their compensation was to be one dol-

*Read before the Ford-Iroquois Medical Society, June 3, 1919.

lar an hour for all the time spent in the performance of their duties. It was a patriotic service, as well as a duty, and carried out in most conscientious observance of the rules and regulations for their guidance, issued by the Provost Marshal General, who was the chief agent of the Secretary of War. The Boards were stimulated to war-like activity by daily telegrams from Washington, not only to speed up the work outlined day by day, but telegrams many times a day, making changes in the interpretation of the various sections of printed regulations, issued for their guidance, that made the work difficult and often subjected boards to adverse criticism by the registrant and his friends. The work was inspiring in that we were a small factor in preparing for national defense. The patriotic spirit and cooperation and eagerness of the men to "get in" as they called it, gave evidence of the American spirit and morale that were to be the essential factors in winning the war.

The diversified experiences of those who were engaged in this work, were sufficiently varied and educational to be of great value for our future guidance, should we be called upon to meet a similar emergency.

Unpleasant and unpopular as the duty appears, of parading our national sins and short comings before the public, it becomes necessary for national sins, like personal ones, to be discovered, confessed, and repented of, before regeneration and reform can correct them. It is far better that we discover them ourselves and show the courage of exposing and correcting them than that the discovery be made by an enemy country who would take advantage of our weakness. The great surprise and shock received by physicians upon exemption boards was the revelation that when we came to examine the registrants and pass upon their physical fitness to meet military requirements for service, we found large numbers totally disqualified by reason of physical defects. Youths summoned to service in a great national peril, when their country needed first-class fighting men, were worthless as a military asset. It was humiliating to them to be rejected, as most of them were eager to enter the army. The pitiable fact is, the fault was not theirs, they had never had their rights, they had never had the guidance, direction, control and advice they should have had in cultivating habits

of health to which they were entitled, by those who were responsible for their physical welfare.

Servia has set us an example in her system of universal physical education and by it she has produced the most superb fighters of any nation on earth because her soldiers, if they are to become soldiers, are trained as all the Serbian youth are trained from childhood, in the Sokols, the national organization of gymnasts in every hamlet throughout the country. The Sokols begin the training at six years of age in the mental, moral and physical development of each individual by physical directors and instructors who follow a prescribed, systematic course suitable to the age, by postural exercises and outdoor games for both boys and girls. This produces alertness of the mind and activity of the body. "From nine to fourteen years of age the classes are drilled in exercises that develops the whole muscular system, arms, legs, thighs, insures deep breathing, nervous coordination or control, resulting in giving them agility, accuracy, courage, speed and strength. From fourteen to twenty they must not only practice the nine to fourteen years exercises, but additional ones to develop the muscles of the trunk, with special view of increasing the circulation of the blood in heart and lungs." Between twenty and thirty they reach the highest point of special training and development of endurance, agility, speed and self control. From thirty to forty years of age they have a series of drills and exercises which not only keep the muscular system supple and strong but exercise a healthy influence upon the nervous system, blood pressure and excretory functions of the body. From forty to sixty the exercise is less strenuous but changed to meet the requirements of age.

Such a course cannot be made safe and successful unless placed under competent medical supervision, and it is voluntary, or made compulsory, so as to include all individuals of every age. What this system has done for the Czechoslovaks in preparing the men and women for the serious and strenuous duties of everyday life, in the way of endurance and self control, was illustrated by the efficiency of their soldiers who challenged the admiration of all military men who saw them tested either in Russia or any other of the allied fronts.

The trouble with our system or lack of sys-

tem has been that gymnasium work is never begun until the student reaches the college or university, with the result that a few are over-trained for athletic contests, and those who need training the worst, sit up on the bleachers and yell for their husky teams who are usually over-trained. We too should adopt some system of national health conservation for the benefit of the individual. Much has been done along these lines, more is necessary to develop us into a higher national standard. The World War for America, terrible as it was, will prove a blessing to future generations if it teaches us that national health is national wealth, not only in time of war, but in time of peace also, and that the unfit are not only a *military* burden, but a burden upon the earning members of society in time of peace. The war created the first necessity, and offered the first opportunity, of taking a census or survey of our man strength as measured by health and physical development of those of military age; and some day when the great mass of valuable facts relating to this phase of our national life are collected and published by the Surgeon General's office, where they have the data at their disposal from nearly eight thousand exemption boards, no doubt it will awaken us to some sense of obligation as to the duties we owe our youth.

Out of 3,208,446 who underwent a careful examination by the boards according to military standards for acceptance, 521,608 were rejected as absolutely unfit for any kind of service; 427,711 were accepted for limited service in some capacity where they could take the place of a healthy man who would be sent to the front. Many of this number, in time, by operation or treatment, might be made serviceable for combative action; 949,318 were ineffective, leaving only 2,259,029 who met the military requirements, and many of these only after the standards of acceptance had been lowered from time to time as to height, weight and muscular development, including the healthiest who could be gotten into shape by wholesome feeding, care of health and training in military camps. These disqualifying defects included teeth, bones and joints, eyes, ears, flat feet, immature muscular development, heart, lungs and hernias that in most instances could have been prevented or remedied during childhood and youth. The numbers, apportionately are as follows: Defects

of bones and joints, 54,744; developmental defects of (height, weight, chest measurements and muscular development,) 39,166; defective ears, 20,465; eyes, 49,801; flat foot, pathological, 18,087; heart and blood vessels, 61,142; hernia, 28,268; nervous and mental, 23,728; tuberculosis, 40,553; skin diseases, 12,519, teeth, 14,793; these were the chief causes for rejections. This summary does not comprise the entire number examined, as the total figures have not been tabulated and published.

Physically, as a nation, we were found to be 30 per cent below par—a nation whose youth represents a partial invalidism or inefficiency of 30 out of every 100. If this was unavoidable it would be excusable. If it is avoidable, and we believe it is, it shows a lack of paternalism on our part. With these facts confronting us, ascertained by the most critical and carefully planned national survey possible, what is to be our future attitude toward those who have fallen under the blight of our neglect in the past? Now that the war is over and we do not need these men for war, will the same apathy and indifference and inertia exist toward the coming generation; or will we put into action national means to correct and prevent these defects such as we did to discover them?

Nations like individuals, earn their rights to exist by reason of their efficiency. If a virile race, they can take care of themselves; if they are weaklings they invite the fate of Belgium and prove a prey to their predatory neighbors.

We have all been impressed by the splendid results of physical training in our camps. We have seen what graduated exercise, regular hours for sleep and good food have accomplished in the development of our men. Thousands who barely passed the lowest standards of requirements by reason of digestive disorders, underweight and flabby muscles, in a few months gained from fifteen to thirty pounds in weight, and muscular stamina that enabled them to stand the physical strain of forced marches of twenty to thirty miles a day under full equipment of sixty to eighty pounds weight with little fatigue. The army camps have been of more benefit to the health of our men than all the sanitariums in the world. The physical improvement in camps, while important, was no less a regeneration than the moral and mental regeneration along patriotic lines, for there they caught the spirit of

the camp, the psychology of the mass, the morale and spirit of American patriots; the most inspiring and ennobling impulse that ever fired a human heart. The spirit of sacrifice for their country: the spirit that prefers death to disgrace of Prussian bondage.

The enthusiasm in the camps was contagious. The work was the hardest the men had ever done and they liked it. They learned fast and were impatient to get in, and finally the day came for embarking and we sent them away with cheers, and the next thing we heard from them they had gone over the top at Chateau Thierry and the Somme and the Champagne and all along the line they gained immortality for themselves and glory and honor for American arms.

We should adopt universal military training in every school, college and university throughout the land, not for conquest but for health, for a better race physically and morally. Military training, wisely employed, would teach our youth discipline, respect for authority (invaluable lessons for their future guidance in civil life), and habits of order, method, attention to details, promptness and preparedness, and above all, inspire them with patriotism and confidence in themselves that should the occasion require, they could go to the fighting front and whip any foe that assailed us, whether it be the field-grey hordes of the Hun or the mongrel Mexicans that have dared and defied us for the past five years.

The Selective Service System and our success in this war showed us that patriotism is not confined to any class—that the millionaire and the miner, the rich and the poor, the descendant of the old Revolutionary stock and the immigrant who had adopted our flag only a few years before for liberty, can march together, and fight together, and die together; in time of national peril all Americans of the same breed, National heroes.

THE COUNTY MEDICAL SOCIETY.*

CHARLES R. KISER, M. D.
MADISON, ILLINOIS.

In casting about for a subject appropriate for this occasion it appeared that a few thoughts

concerning the County Medical Society would be very opportune. It has been so lightly regarded by individual members, some of whom have stated that they get nothing out of the society and hence do not attend the meetings. The contrary would be nearer the truth. They do not attend and hence get nothing out of it. Even this is far from the truth, for every member of the profession reaps benefits accruing on account of the mere existence of the society, fostered and maintained by those who do attend.

The Madison County Medical Society was organized in the late fifties. The meetings were held under difficulties, because physicians were few, the membership small and distances great, compared to the present time. However, meetings were held and the organization kept alive notwithstanding the difficulties. Objects attained under difficulties are appreciated in proportion to the effort required. This may account for the comparatively small percentage of the membership which usually attends our regular monthly meetings.

Within a few years after its organization problems of national interest absorbed the attention of the members of the society and it lived chiefly in name for a number of years until it was reorganized in Alton in 1903. Conspicuous among those who reorganized our Madison County Medical Society were Dr. E. W. Fiegenbaum, our retiring State President; Drs. Joseph Pogue and S. T. Robinson, of Edwardsville; Drs. Waldo Fisher, W. A. Haskel, E. C. Lemen and T. L. Foulds, of Alton; physicians who were honored in our county on account of their ability and length of service in the profession. These are the men who gave the organization an impetus, and imbued it with a vigor which has kept it going and growing until it has become a real factor in the profession.

At present the basal unit of all medical organization is the County Medical Society, upon which is built the State Society and the American Medical Association. Our State Society could not be so effective if it were not built upon the County Societies and the American Medical Association reaches back to the County Societies for its membership.

If there is prospective State legislation affecting the interests of the profession, the State Society by its representative sends a warning to

*President's annual address. Read before the Madison County Medical Society, June 6, 1919.

its units, the County Societies, to get busy; theoretically, that legislators may be approached and may know at first hand the attitude of the members of the profession in their respective communities and may intelligently vote for the interests of their constituents. A resultant cumulative influence from every portion of the state should then be perceptible. If you are an active or an inactive member of the society, you know how well you have performed your part, how far you have discharged your duty to the medical profession. Have the majority of us performed our duty to the profession to which we belong? The answer is easily obtained by a little inquiry.

If we as individuals are neglectful or unwilling to do an evident duty, can we expect legislators to know our opinion concerning proposed bills affecting our interests; can we expect legislators who may be wholly uninterested in the medical profession to guard the interests of that profession? It does not seem reasonable to suppose that they would, and certain legislative acts have shown that they do not.

Favorable legislation has been obtained by the expressed views of a small minority of the members of the County Societies of the state. This being a known truth, it does not take a great flight of imagination to perceive the effect, if the total membership of the County Societies would see its duties as individuals and become active. Medical legislation of the highest order would then be easily obtainable when needed.

Is an eligible physician, who is not a member of the County Society, or an inactive member of the society, entitled to enjoy the benefits accruing to the profession, which have been obtained by reason of the interest of the active members of the society? He enjoys the rights and privileges just the same as those who have spent their time and efforts to obtain them; but it is not equitable.

About ninety per cent of the physicians of Madison County are members of the County Medical Society. In the State of Illinois there are one hundred county medical societies, which together with the societies of the large cities, have as members approximately fifty per cent of all the physicians of the state. About twenty per cent of the membership is active. In other words, about ten per cent of the medical profes-

sion are active members of the city and county societies and only a small proportion of this ten per cent are awake, watchfully and zealously guarding the interests of the whole profession in legislative matters.

Many of those whose influence would be most effective in prospective legislation do not give freely of their time for the reason that they are too busy, are no longer interested for personal reasons, or have lost interest because of frequent postponements of hearing before committees. It is easy to see how lack of interest jeopardizes the welfare of the medical profession of the state and how necessary it is to revivify the units of medical organization.

Here let us consider a point that at times has a tendency to lessen the active membership and attendance at the regular monthly meetings. Not only in this, but also in other societies, it is sometimes said that a small number of the membership, or in other words a clique, govern the proceedings.

In all organizations there are leaders without whom the organization would accomplish little. There must be somebody to take the initiative, somebody to propose action. The membership must approve or disapprove the suggestions offered, thus expressing the will of the profession. If for any reason you do not like the leadership, attend regularly, become more active, show your ability, take the initiative, and the members will gladly take cognizance of superior qualifications for leadership. Following this thought do not cause the laity to hold the profession in disrepute by discrediting the fundamental unit of its organization, simply because you are not a leader. Uphold the organization. Strengthen it by your presence and activity. Be a booster.

The strength of a society depends upon the interest and activity of its individual members. A half-dozen active workers may keep a society alive. Fifteen or twenty can add zest to the meetings and were it possible to have every member interested and active and practically all the physicians as members, what an ideal society we would have, what a wonderful organization and what power we could exercise.

Have we any pride in our profession? Have we doubt concerning its future? Would it not be advisable to insure its future by strengthen-

ing our organization, by securing an application for membership from every eligible physician in the county who is not already a member, by increasing the regular attendance at our monthly meetings by special invitation? There is little doubt that interest in the organization will increase in proportion to the attendance.

While there is some interest in medical organization this would seem to be an opportune time in all the county societies to start a membership campaign and gather in throughout the state the greater part of the fifty per cent who are still not on the rolls of the organization.

This is not simply visionary but intensely practical and necessary, if we expect to uphold the standard of the profession. It only requires the will to do. Let every active member who knows an eligible physician, not a member of the society, volunteer to secure his application. By the influence of example in our own county we may have the gratification of observing other county societies grow strong by gathering in the unattached.

SERPIGINOUS ULCER OF THE CORNEA AND ITS TREATMENT.*

WILLIS O. NANCE, M. D.
CHICAGO

To the oculist whose practice brings him in frequent contact with industrial injuries, the subject of serpiginous ulcer of the cornea cannot but be of intense interest. This variety of ulcer occurs almost exclusively among workers in the trades, and in many instances has been the cause of the loss of sight, and in fact the complete destruction of many eyes. Of recent years with improved therapeutic technic, the prognosis of this class of cases seems to have improved materially. The clinical history and picture of *ulcus serpens* is quite familiar to every oculist. The history of an injury to the eye, sometimes very slight, involving a break of the epithelial surface of the cornea, a whitish spot perhaps of only the size of a pin head, followed within 24 hours by a haziness of the corneal tissue and gradual enlargement of the ulcer, beginning hypopyon, the whole process then rapidly progressing within a few days to perforation of the cornea, frequently panophthalmitis and complete

destruction of the eye. The condition must be recognized at once and early and energetic treatment must be instituted if the disease is to be checked and a favorable outcome is to be expected.

The micro-organisms involved in this type of ulcer are the pneumococcus usually, occasionally the diplobacillus of Morax and Axenfeld and doubtless in a minority of cases a mixture of the two. It is quite essential, as a general proposition, in the management of the case to know the bacterial type of organism present. For instance, every one is familiar with the almost specific action of zinc sulphate on the Morax-Axenfeld variety, and where such a bacterial growth exists, no matter what other line of treatment is employed, the zinc solution should not be neglected. But the pneumococcus *lanceolatus* is the usual micro-organism involved and in fact some ophthalmologists are inclined to designate *ulcus serpens* as pneumococcal ulcer, to the exclusion of the diplobacillus as a causative factor and treat it as such.

The line of treatment indicated in this form of ulcer involves such measures as may best be employed to prevent the spread of the ulcerative process with its accompanying symptoms. I presume that most of us have at times employed the various agents recommended in this disease, carbolic acid, trichloroacetic acid, tincture iodine, the actual cautery, paracentesis of the cornea, Sæmisch's operation, optochin, etc., and all with the varying results, not the least of which has been a source of much gratification to either the patient or the surgeon. I can at this moment recall the comparatively numerous cases of *serpens ulcer* treated at the Illinois Charitable Eye and Ear Infirmary during my years of service at that institution in my own service and in those of my colleagues and I cannot but remember the frequent tragic results observed in those cases. I also remember well a number of similar instances occurring in my own private practice. It is but to observe that by far the great majority of cases resulted in at least more or less dense leucomata, sufficient to greatly impair the patient's vision and in a few total destruction and consequent removal of the eyeball. The average length of time the patient was under hospital treatment was from one to several weeks, in the mild cases to sometimes more than two or three months in the more severe ones.

*Read at the 69th Annual Meeting of the Illinois State Medical Society, at Peoria, May 21, 1919.

Fortunately, I do not believe that these cases are now occurring with quite the degree of frequency that they did some years ago. The campaign of education in the prevention of eye accidents conducted by the various medical societies and other bodies, not excluding reference to the value of the work of our own section, has induced those in charge of industrial institutions to better safeguard their employees from injury and to more generally protect their interests by referring what may seemingly appear to be slight eye injuries to a competent oculist for care rather than to take chances on the injury being only a simple one and trusting to luck that no serious results will follow. I have seen more than one eye lost as the result of hypopyon ulcer which occurred in cases where attempts had been made by fellow workers to remove foreign bodies from the eye, and I doubt if there is an experienced eye surgeon present today who cannot recall the same experience. One case is fresh in my memory where a railroad employee allowed an obliging friend to wipe something off his cornea with a pocket handkerchief and spent the next few weeks in a hospital with a typical severe pneumococcal corneal ulcer and subsequently recovered only a slight percentage of vision. More extended consideration of the prevention of eye injuries and their careful care on the part of those in charge of factories, mines, etc., will result in still less frequent occurrences of cases of the kind we are now discussing.

Of course the influence of lachrymal disease in the causation of *ulcus serpens* must be given important consideration. The presence of a denuded cornea plus lachrymal disease is almost certain to result in hypopyon ulcer. For this reason an employee with a "watery" eye, whose duties render him unreasonably susceptible to ocular injury should be warned of his danger and the eye trouble cleared up by proper treatment.

After serpiginous ulcer has developed, as suggested before, prompt and energetic treatment must be instituted and pursued. There is no time then for hesitation *in re* value or inefficacy of this or that remedy or procedure, for a day or two of experimentation or dilly-dallying may result in loss of the eye.

There are two indications, among others, which must be met. The first is to check the extension of the ulcer by the destruction of the

invading micro-organism. This can be done by the application of heat. Direct cauterization will destroy the micro-organisms but can seldom be employed in such a manner as to limit its destructive action to the diseased area itself. For many years I employed cauterization by heat in every severe case of corneal ulcer and with only varying success. In other cases, tincture of iodine, phenol, trichloroacetic acid, methylene blue, ethyl-hydrocuprein, various mercurial preparations including the intraorbital injections of the cyanid, Saenisch's operation and so on with the same results. With the introduction of optochin as an anti-pneumococcic, my hopes were for a short while elevated but I cannot now feel that it is of any very great value.

The second indication is to bring about the reduction of the increased tension, which is almost always present in these cases. While this point is quite generally mentioned in the textbooks, I have never felt that its importance had been given anywhere near the prominence that it deserves. The severe cases practically all have a high tension and I have seen cases improve under reduction of the tension by paracentesis of the anterior chamber oft-repeated, when no other form of treatment gave much encouragement. Whether the tension is the cause or result of the disease I do not pretend to know, but I do know that the severe cases all have increased tension and the case is not apt to do well so long as the tension is raised.

Application of heat to the cornea by holding a cautery point as close to it as possible without actually touching it is a method of treatment which after several years' employment I can unhesitatingly recommend. Weekers, of Liege, was a pioneer worker in this field. His description is published in the *Ophthalmoscope* of 1914. Later Prince wrote of the method in the *Ophthalmic Record* (1916), and described it under the name "Pasteurization." He employed an olive-shaped copper ball attached to a handle which is heated over a spiritlamp or gas jet. Shahan, of St. Louis, conducted a series of experiments on animals and found that a temperature of 152 degrees F. for one minute was sufficient to stop the ulcerative process both bacteriologically and clinically. His simplified thermaphore consists of a nickel-plated brass applicator hollowed out to receive the bulb of the

thermometer. The applicator when heated to a desired temperature is inserted into a felt-lined case which serves as an insulating jacket for retaining the heat. With Shahan's instrument, one has the advantage of being able to measure the degree of heat as applied. The instrument was exhibited at the 1917 meeting of the American Medical Association. Shahan describes the mode of action of thermo-therapy as follows:

1. Direct destruction of organisms in the substantia propria.

2. Expulsion of toxins, dead bacteria, etc., by a lymph flow established shortly after application.

3. A general leucocytosis of the cornea which reaches its height 2 or 3 days after the application.

Since employing indirect thermo-therapy or "Chaufrage" as the French are inclined to term it, in corneal ulcers, my results have been uniformly better than those obtained before and it is only seldom now that I employ the old method of direct cauterization. Where in former days I have seen severe corneal ulcers progress from day to day under the most approved treatment including cauterization, and the tissue almost "melt" away, I am led to expect now to see the ulcerative process checked frequently from the first application of the heat and a general improvement take place with rapidity and certainty. "Chaufrage" is safe and easily performed and in my opinion is of greater value in severe corneal ulcers than are all of the other therapeutic measures combined. The fact that in this procedure no adjacent tissue is destroyed, as is apt to be the case in direct cauterization, also makes for end result and naturally better vision.

Of course in the case of thermo-therapy, one would not neglect to employ the other usual remedies as indicated, zinc sulphate, frequent irrigations, protective bandages, etc., and also perhaps, atropin, although I have been so much impressed with the necessity of keeping the tension lowered that I have frequently used eserine instead.

Relative to the serum treatment of ulcers of pneumococcal origin I have had but very little experience with it. I am aware that some observers have reported excellent results with this procedure. Theoretically at least, Roemer's

conclusions are logical. Marple and Kearney are among those who are recorded recently as having noted improvement in cases treated with the serum.

In conclusion let me suggest the following:

1. Fortunately severe corneal ulcers are occurring with less frequency than formerly on account of the greater precautions now being taken in many industrial plants to protect employees from injury and the earlier handling of injury cases by experienced eye surgeons.

2. Ulcus serpens and lachrymal disease are so intimately associated that the risk of a "watery" eye should receive more emphasis than it usually does.

3. When hypopyon ulcer has developed prompt and energetic treatment must be instituted and carried on. The indications are to check the extension of the ulcer and lower the tension of the eye-ball.

4. Thermo-therapy is doubtless the best treatment to bring about destruction of invading organisms without damage to the adjacent tissues. "Chaufrage" properly performed has no contraindications and should be employed in every case of severe corneal ulcer.

5. Serum therapy in pneumococcal ulcer is doubtless of value and published reports should encourage its further employment.

30 North Michigan Avenue.

DISCUSSION

DR. H. W. WOODRUFF (Joliet): I realize that Dr. Nance could not cover the entire ground in the treatment of ulcer of the cornea, that is, that he could not go all over the various lines of treatment. If he attempted to do so, he would not get through today, but I feel that there are two additions to his suggestions that I believe are of value.

In Dr. Nance's remarks regarding the use of heat, he suggests a method which has the advantage of at least not causing any further destruction to the cornea, which, of course, is worthy of consideration.

I remember hearing Dr. Veerhof, of Boston, in presenting this subject, describe the method of cauterization with iodine, which I think is worth while considering. It has to do with the position of the patient in making the application of the iodine. He has the patient lying down, with the eye directed to the ceiling, and, as you know, these ulcers are usually centrally located, and he aims to have the ulcer pointing directly upward. Then he applies the solution of iodine to the ulcer, taking care that there be no excess of it to run over the cornea. He keeps the patient in that position for several minutes, perhaps for five minutes.

I have, for a number of years, used a much stronger solution of iodine, the formula of which I will give you. It is a solution used by dentists, and consists of fifteen grains of Iodide of zinc, twenty-five grains of iodine crystals, and fifty of glycerin and ten of water; in other words, making a solution of twenty-five per cent of iodine. As you will note, that is a very strong solution of iodine, but if it is used in the way that Veerhof suggests, and at the same time having the advantage of this fifty per cent of glycerin, it is much thicker than an aqueous solution or an alcoholic solution of iodine and, therefore, it will retain its place much better in the little hollow produced by the ulcer, so that you get quite a penetrating effect that is very advantageous.

I hardly feel that it would be justifiable for me to stop here without also reminding Dr. Nance that he has forgotten the use of cyanid of mercury injection for corneal ulcer. There is another method of treatment that is devoid of danger. I know some are very much afraid of cyanid of mercury, but there are no grounds for that, although it will contribute to the elevation of the tension sometimes. But if you are looking out for that, as you should be, your paracentesis will relieve that. (Applause.)

DR. OLIVER TYDINGS (Chicago): I have had cases that have been under the care of other men clear up magically by the removal of a part of the turbinate by straightening the septum, thus giving free drainage and ventilation to the nasal cavity, and I would not treat a case of serpiginous ulcer without those conditions being complied with.

There is one thing on which Dr. Nance may be all right, but as I have seen it used he is all wrong, and that is on the protective bandage. I visited in one of our Eastern cities at one time when they were using the protective bandage, and the most miserable results that I ever saw in my life obtained—and that was within the last year or two—too recent for that form of treatment to have been used.

I fully endorse the thermo-therapy treatment, and I would say that by the heat treatment we can accomplish all that we can hope to. I would endorse that treatment as well as that of reducing tension as quickly as possible.

DR. NANCE: (Closing Discussion) Mr. Chairman, I only want to thank the gentlemen who have shown sufficient interest in the paper to listen to its reading, and to thank those who have discussed it.

The two points I want to bring out here are neither new, but I believe that they cannot be emphasized too strongly. One is relative to the tension of the eye, and the other is to the advantage of using the so-called "Chauffage" or thermo-therapy treatment. It is an advanced step. In the treatment of these corneal ulcers, those which, before its use, at least in my hands, resulted tragically—many of them—since its use have been clearing up much more than they formerly did under the old treatment, and more attention is paid to the reduction of the eye tension.

Relative to the intra-orbital injections of cyanid, which I have used with considerable success in the

past, and which I first used in conjunction with Dr. Woodruff at the Infirmary eight or ten years ago, I simply want to call Dr. Woodruff's attention to the fact that he overlooked some of the things I mentioned in the paper that I read. I believe it is one of the methods which still has its use in the treatment of these very severe cases and which I do not hesitate to employ, even with the other methods that I have learned to use since employing that the first time. (Applause.)

THE OPERATIVE TREATMENT OF CHRONIC SUPPURATIVE OTITIS MEDIA.*

ALFRED LEWY, M. D.
CHICAGO

The magnitude of this subject, which was assigned to me, makes it impracticable to enter into any detailed description of operative technic in the short time at our disposal. This part of the subject is well covered in any of our standard text-books on otology, so I shall limit myself largely to personal opinions as to indications for operative interference and to the choice of operation, in the hope that the ensuing discussion will result in an exchange of ideas that will bring out many points of value to all of us.

Many cases, probably a large majority of all cases, are amenable to cure, or at least to good control, by local treatment alone or accompanied by minor surgical measures, provided the patient has the intelligence, time, money and persistence to permit such treatments being carried out. However, many of our patients, especially clinic patients, are not so fortunately situated. So we have confronting us what may be called the economic indication. Before we can advise wisely we must know how much time the patient can devote to treatment, and must judge his intelligence and probable persistence and weigh in this information with the clinical probabilities in his particular case.

In another class are what may be called urgent cases. Here the only question is between immediate operation and watchful waiting. Into this class we put intracranial complications, including labyrinth and sinus cases, general sepsis and acute exacerbations in general. In all these conditions operation sooner or later is indicated

*Read by invitation before the Chicago Laryngological and Otological Society.

but a good diagnosis is the prerequisite to the decision as to the best time to operate. Exploratory operation is justifiable when other diagnostic measures have been exhausted, or when we are satisfied that there is pus in the cranial cavity which we have been unable to locate otherwise. As a groundwork for diagnosis these cases demand a history, especially as to recent developments; a general examination with special reference to the facial expression, appearance of tongue, skin and bodily condition; examination of blood, urine, viscera and musculature, followed by the neurologic, including fundus examination and Barany tests were applicable; study of the pulse and temperature curve, and finally spinal puncture, with cell count, chemical and bacteriologic investigation. These tests and studies require time, and time is valuable in intracranial complications, yet error is fatal, and the percentage of recovery is certainly greater with the man who has his facts in hand and who knows when and how to operate. Even on a patient brought in in a stupor, without history, but with a foul discharge from the ear, some tests can be made. For instance, we should like to exclude diabetic or uremic coma and apoplexy before exploring the brain for abscess. In an ear case with chill and high fever we should want to watch developments long enough to exclude the many acute infectious diseases which begin with similar symptoms, before exploring the lateral sinus. However I doubt if a patient with sinus thrombosis was ever lost by failure to operate after the first chill instead of waiting to establish a diagnosis.

I hesitate to approach the subject of labyrinth complication, on which whole volumes have been written. I should first determine if possible whether there is any hearing or any labyrinth reaction to be elicited; during the period of active labyrinth symptoms, absolute rest in a quiet, darkened room, is indicated, with careful watching for the development of symptoms of endocranial involvement, in the meantime obtaining as good drainage as possible by minor measures. In the event of endocranial complications, immediate radical operation with labyrinth operation if the labyrinth is dead, that is, does not respond to any of the usual stimuli. In diffuse suppurative labyrinthitis either course, immediate operation or expectant treatment is fraught with danger,

but I believe the procedure advised herein is on the whole less dangerous. After the acute symptoms subside the radical operation is done, and if at this time the labyrinth is dead, the question of operation thereon can be determined by the operative findings, that is sequestrum, or necrosis of the labyrinthine wall. Certainly a live labyrinth should not be operated on. If the labyrinth symptoms have been recent, or are still present at the time of operation, probably the Neumann operation is the preferable one. An important symptom, when obtainable, in determining the death of the labyrinth, is the change of the Weber test from the sick to the well ear. In the case of a latent labyrinthitis, that is a dead labyrinth which has been symptomless for a long time, the question of operation thereon can also be determined by the operative findings. In a previous paper I have treated this subject more in detail.¹ Cases in which the labyrinth disturbance is not violent, and in which we are satisfied that the trouble is due to retained pus in the middle ear spaces, may be operated on without waiting. In this connection Mygind² reports a new fistula symptom, viz., a peculiar nystagmus induced by compression of the carotid artery of the affected side.

In acute exacerbations of chronic suppurations some writers advocate immediate operation, as it is at such times that complications are likely to develop. Here also I am in favor of non-operative treatment with careful observation until the acute symptoms subside as the safer procedure. One can wait a few days at least to observe the course of the attack. The advent of endocranial complication demands immediate intervention as stated above. Also subperiosteal abscess demands operation, although the plastic work must be postponed.

We now come to the much larger group of cases not immediately dangerous, but some of which may become so. The following elements come up for consideration:

(a) The probability of their developing serious complications;

(b) The amount of disability or discomfort caused;

(c) The probability of cure by less radical measures; here we must also include the social

¹Journal O. O. & L., April, 1917.

²Journal Laryngology, May, 1918. (British)

indication as mentioned above; also the position of life insurance companies in regard to suppurating ears. Most of them refuse chronic suppurating ears. Some accept permanent perforation with occasional discharge.

All these factors must be considered together in any concrete case. In general we believe that all non-urgent cases should have the benefit of a trial course of treatment, including careful investigation of accessory sinuses and nasopharynx and eustachian tube. I have frequently seen cases with polyps get well, and even cholesteatoma cases occasionally at least held in check. Lessening of discharge and discomfort, and disappearance of foul odor are encouraging. However, in spite of persistent treatment many cases do not heal, and even some of those we consider non-dangerous discharge indefinitely.

The conditions that should incline us toward operative interference in non-urgent cases are: cholesteatoma, persistent after repeated cleanings; caries of the temporal bone; fistula of the mastoid or of the bony canal; conditions that interfere with proper drainage, such as strictures of the canal, polypi and granulation tissue, persistently recurring after removal; persistent adhesions of the remains of the membrana tympani or malleus to the inner wall, especially when associated with marginal perforation, i. e., erosion of the annulus tympanicus. This of course includes many attic and aditus suppurations; frequent or persistent headache, vertigo, general ill-health or sick appearance not otherwise accounted for; a persistently fetid suppuration resisting all treatment.

On the other side of this question must also be weighed the probability of cure by operation. While we can in most cases assure our patients of their safety we can by no means assure them of a cure of the discharge. Probably about 20 per cent (Neumann) of all cases are tubal discharge or mucous membrane infections. These are usually characterized by a central perforation, that is the destructive process in the tympanic membrane does not extend to the annulus tympanicus, and the discharge, if fetid, rapidly loses that character under treatment. The character and persistence of the discharge also varies with nasopharyngeal conditions. In them operation is needless and generally useless, except perhaps

closure of the eustachian tube as recommended by Yankauer and others.

My own observation leads me to believe, and this observation covers many cases operated on by others as well, that in cases really requiring the radical operation we may expect about 50 per cent of dry ears. However many cases that might become dangerous are made safe, and this is the principal point to consider. We must also consider the condition of the hearing, which is not only not better, but often worse after the operation. This might also result naturally with out operation. Perhaps the hearing is improved by some of the modified radical operations in which the ossicles are not removed. I am inclined to believe that those cases of radical operation in which marked improvement is reported after operation were tested before operation during an acute exacerbation, or with the ear full of polyps or pus.

Having considered the indications suggested above and decided upon operative procedure we may still select the type of operation suitable.

Ossiculectomy may be done when the necrotic process is believed to be confined to the ossicles or the attic and aditus, provided the hearing is less than one meter for the voice. In doubtful cases it may be tried as a preliminary to the radical. It has the advantage of being done under local anesthesia and of not causing any period of disability. It is contraindicated by labyrinthine or endocranial symptoms, and is not without danger of injury to the facial nerve and labyrinth.

There are several modified radical operations, the best known of which in this country is probably Heath's or Ballenger's improvement thereon, the meato-mastoid. They are all alike in that they aim to preserve the ossicular chain. Heath's preserves the annulus tympanicus, and requires very elaborate after treatment. Stacke, Bondy and Blackwell remove the outer attic wall, carefully guarding the ossicles and membrana tympani, which (according to Stacke) is expected to adhere to the inner wall, closing off the eustachian tube and tympanic cavity from the epitympanum. These operations have a limited field, but if they live up to the claims of their advocates (and apparently they do not), they ought to have their place, which place is not well defined except by Stacke, who says that

his operation is useful when the perforation is in Schrapnell's or in posterior superior margin or into the aditus, and when it is closed off from the eustachian tube, as determined by auscultation; then if the process is not of too long standing improvement in hearing may be expected, even though the incus is destroyed or the malleus covered with granulation tissue. Most of us would probably reverse his technic and work from the mastoid inward. I have not done the modified radical, and my observation is limited to one successful case and about a dozen failures. My idea is that some type of modified radical, selected according to the conditions, should be done when we believe that the simple mastoidectomy will not suffice and the hearing is still fair, especially in children; when both ears are to be operated on the better ear may be done.

For all other chronic suppuration cases which require operation at all, the complete radical operation is done having first tested the labyrinth and searched for evidence of endocranial involvement. I have no special improvement to suggest over the excellent technic described in many text-books, but hope the discussion will bring out some, and especially hope that some valuable information will be elicited bearing on the after treatment.

BACTERIURIA

LOUIS E. SCHMIDT, M. D.,
CHICAGO

In the consideration of bacterinria it is necessary to have an understanding of the subject as it is regarded at the present time.

If freshly voided urine *in the absence of pus* is turbid, this turbidity being entirely due to the presence of microorganisms and not due to urinary salts, then this condition is referred to as bacteriuria.

However there are a class of cases where bacteriuria exists and where an inflammatory condition co-exists which will also permit the presence of pus in the urine. In the vast majority of cases as seen in daily routine practice, the urine as a rule contains pus in varying amounts. This pus, however, may or may not have a bearing on the individual case. Take for instance the so-called cases of colon bacillus infections of the kidneys. Here one finds large numbers of bacteria with pus and blood in the urine. In these

cases it is true that bacteriuria remains often times for a varying period of time after the pus and blood have disappeared. I have yet failed to observe acute colon bacillus infection cases where the bacteriuria remaining has become permanent. It has been stated that bacteriuria has been noted, previous to a colon bacillus infection of the kidneys. Personally I have never had occasion to observe this phenomenon. Writers have suggested this in connection with the significance of bacteriuria and I have been on the lookout for this for more than twenty years. However, there is reason why these conditions should not exist.

Again, for instance, the bacteria may come down from the upper urinary tract and the pus which may be found present may come from some chronic inflammatory condition of the urethra or adnexa of the male; or the reverse, as I have had occasion to see it. There may be an inflammatory involvement of the higher urinary tract, either one or both kidneys, which will account for the pus and yet I have demonstrated to my own satisfaction that the real bacterinric condition was derived from the adnexa of the urethra in the male.

Furthermore there is another class of cases where it has been definitely ascertained that conditions, pathological in character, exist *outside* of the urinary tract, not necessarily immediately in contact with the urinary organs except with the lymphatics or with exudates which permit of the belief that they are the foci from which bacteria, pus and blood make their entrance into the urinary stream.

As can be understood, the amount of pus and also the number of bacteria in the urine may be variable and changeable from time to time and where finally only a bacteriuria remains. Finally there are numerous cases, and I wish to emphasize that *I have particular reference to this distinct group of cases*, with complete absence of pus, only the presence of bacteria, as the cause of the turbidity of the urine, and where no demonstrable lesion, inflammatory or otherwise, can be shown to be present or even suspected of ever having been present, in connection with the urinary tract; however, it is to be admitted that probably some previous inflammatory condition was the forerunner of the bacteriuria.

In contradiction to the aforementioned defi-

nition of bacteriuria, as it still is defined in modern text-books, and I might state by all older as well as many modern writers, I have oftentimes noted cases of perfectly clear urine, where this peculiar turbidity or cloudiness is always absent, which the older as well as most modern writers state as always existing in cases of bacteriuria. In fact, have noted in many instances that it has never existed in certain cases, at least during the time of observation which in some instances has covered a period of years. Yet during this time, repeated examinations have always shown by cultural methods, the same kind and constant presence of bacteria. Therefore an apparently clear urine, at least to the naked eye, may also be referred to as a case of bacteriuria.

The urine, from a bacteriologic viewpoint, has been for many years thoroughly studied. Naturally where there has been pus present many interesting factors have been noted. However, many instances are on record where the subject of true bacteriuria has been properly recognized. In other words, the bacteriology of the urine, both in health and disease, has received much attention. This includes the study of the urine of the new born as well as at all ages of life of both male and female. The review of all the work of this kind is exceptionally interesting. It would be impossible to outline systematically the bacteriology, as there is much inaccuracy and loss of classification of bacteria which are oftentimes described but not positively identified. The practical importance rests with the thoroughly recognized pathogenic bacteria. It is not my intention to even attempt to consider this in this communication as it would take me away from the subject in hand. In order to study this subject intelligently it is necessary to be thoroughly familiar with the literature. As for the practical laboratory study, it is needless for me to state that a most thorough knowledge of the modern bacteriological technic must be mastered in order to appreciate the significance of the findings. Nor is it advisable for me to describe the technical demands which are necessary to carry out a study of this kind. All this is easily to be ascertained from the literature.

In the investigation of bacteriuria and the bacteriology of the urine, even with the presence of pus it is highly desirable to attempt to ascertain their mode of entrance into the urinary stream.

In the acute infectious diseases, such as typhoid fever for instance, it is not at all uncommon to find the bacillus typhosus, without pus or blood in the urine, a true bacilluria. It rarely remains present after the active course of the disease, yet once in a while it is a permanent condition and then the individual is referred to as a carrier.

Again in chronic pulmonary tuberculosis investigations have shown that the bacillus tuberculosis is eliminated through the kidneys constantly in a fair percentage of cases. There always has been and still is a discussion as to whether or not definite changes are present in the kidneys which will permit of this.

So it is with many other infectious diseases. I might add, of course, that these as well as other bacteria may produce at any time true inflammatory diseases of the urinary tract, which may be the only involvement or may be concomitant with the bacilluria. Naturally inflammatory diseases, such as sinus, tonsil, or even urethral diseases, permit the entrance of bacteria into the blood stream, and may be productive of emboli or are simply eliminated by the kidneys or may be concurrent. Bacteria have been frequently traced to focal conditions such as these. Furthermore involved inflammatory organs adjacent or in the immediate neighborhood of the urinary organs, and anatomical studies have shown their direct lymphatic connection with the urinary organs, as the colon with the kidneys—have been definitely shown to allow the bacteria to enter the lymph channels and enter the kidney by the anastomosis of these lymph vessels. Take for instance all the cases of abdominal intestinal stasis where the bacillus coli communis is so frequently found present in the urine. It is the most plausible explanation grounded on accurate observation and can scarcely be questioned. In these cases the bacteriuria are regarded as lymphogenous in character.

Take the urinary tract into consideration. I do not doubt that at the time of an inflammatory disease or following, there may be free bacteria present, other than those, although of the same kind, which are present due directly to the inflammatory process and are adherent to organic material. Take for instance patients that have had urethral infections with adnexa complications and which have run their course. Often times no clinical evidence or further inflammatory dis-

ease remains, no focal conditions, no pus in urine or none to be expressed from the adnexa and no blood changes or temperature or general symptoms. Yet bacteria may be constantly found in the urine.

The point of entrance into the urine of the bacteria has undoubtedly often been found. To the best of my knowledge the literature at hand has never cited sufficient individual cases and has never given any definite statements but simply pointed out generalities such as have already been mentioned, that is, they have accompanied or followed certain inflammatory diseases of the urinary tract, adjacent or even only neighboring. Occasionally following instrumental treatment or examination bacilluria has been noticed, and naturally the point of entrance has been considered to be due to traumatism and the bacteria to gain entrance at the site of the trauma.

Here again the question comes up as to why bacteria are pathogenic at certain times and again non-pathogenic at other times. Or why at times they are productive of marked inflammatory reaction and at other times apparently not at all injurious to the same tissue. I need only mention the most common and the one familiar to all. Take the colon bacillus group into consideration. Here the colon bacillus at times causes most violent attacks of true infection of the kidneys, high temperature, chills as well as most pronounced general and local signs and symptoms. In these cases the point of entrance is regarded to be exactly the same as in the cases of colon bacillus bacteriuria, but why acute inflammation sets in, in one series of cases and not in others, has as yet not been thoroughly explained. Many theories have been set up and it is true that many factors may be productive of the variations. I need only mention the virulence of the particular strain, the general and local resistance of the individual as being factors in the explanation. Experimental work has shown that the bacteria of the intestines after injury to the intestinal walls may reach the urinary tract. Or if the anus is tightly closed intestinal bacteria make their appearance in the urine. Again ticing off the penis, thereby not permitting the passage of urine but causing a stasis or retention of urine has permitted bacteria to enter the urinary tract.

Bacteriuria is supposed to occur under con-

ditions similar to inflammatory diseases. If an inflammatory condition subsides, certain changes in the tissue result and there is a disappearance of the invading micro-organisms. Not so with bacteriuria. Here there are no evident microscopic changes present in the tissue and in some instances the bacteria appear and reappear, but I believe in most instances remain rather as a permanent phenomenon. It is more reasonable to suppose that an inflammatory condition subsides and allows of definite changes to remain, which permit of the passage of bacteria. For this reason, with prepared ground, so to say, the relapses of inflammatory signs and symptoms during the course of a bacteriuria are easily accounted for. Whether or not bacteriuria is simply a sign or form of manifestation of disease, either in or out of the urinary tract, it certainly is worthy of attention from this viewpoint or by itself. Naturally of importance when the question of treatment is to be considered, or how would it be possible to attempt to successfully cope with the question.

Bacteriuria, in the sense that I have described, whether considered simply as a manifestation of some disease elsewhere in the body or whether the bacteriuria is considered as a disease by itself, on account of the long train of symptoms which may accompany it, is at least a condition of sufficient significance and magnitude to the patient as to demand on his part medical advice. It is true that in many of my personally observed cases the symptomatology is varied.

1. In some instances practically a complete absence of both local and general symptoms, or only temporary absence.

2. In certain other instances the general symptoms only may be present, such as headache, backache, feeling of extreme tiredness, lack of ambition, loss of appetite, constipation, nausea or vomiting, restlessness, loss of sleep and often great thirst. In several instances I have noted temperature, in several instances chills or only a feeling of chilliness.

3. Again there are those cases which present themselves only with local urinary symptoms, such as frequency both day and night, tenesmus, burning or smarting along urethra or bladder or both. Oftentimes only during act of urination and again may be present more or less all the time,

4. Finally there are those cases of bacteriuria where there are both general and local symptoms present and of varying severity, at times of great intensity and again but scarcely noticeable.

During the course of any one of these four distinct types there may be without known cause chills and fever, or only a single chill followed by fever. In these cases naturally both one or all of the general and local symptoms may become very pronounced. After a varying period of time the individual cases again lapse back into their chronic state. As a rule pus appears in the urine at these times; however, in some personally observed cases I have not found this to be true, though the bacteria were enormously increased in numbers. In other words, there are many cases where the appearance of the urine is the only manifestation of bacteriuria. That is, as a rule, a turbidity, not necessarily so, as I have shown, and besides occasionally a disagreeable odor to the urine is to be noted.

As common as bacteriuria is admitted to be it never has in my opinion received adequate attention; why, I do not understand. For anyone who has ever been on the alert and kept strict account of the clinical course of numerous cases will be obliged to admit that the symptoms unquestionably produced by the condition are frequently so distressing as to call for medical care. It is strange to add that often times those urines which appear to be clear, yet carriers of bacteria, are the cause of as much symptomatology as those urines which are loaded with bacteria. In order to elucidate the various phases and groups of cases it is desirable to append a few of the cases which have been observed.

Group 1. M. 205. Female, aged 47 years; unmarried. Seen November, 1900.

Acknowledged no sickness of any kind except typhoid fever at age of 31 years. States never constipated nor diarrheal conditions, in fact no bowel disturbances. Menstrual history is negative. Examination in every respect is negative except for cloudy appearance of urine, which she claims has persisted since typhoid fever attack. She does not recall any local or general symptoms except what she refers to as chronic tiredness. Cystoscopically bladder negative, ureteral catheterization shows turbid urine from both sides, and cultures show the *Bacillus typhosus*. Repeated examination in the course of the following years with renal pelvis lavage and general treatment gave no relief whatsoever.

Group 2. V.176. Male, aged 55 years.

First and only attack of gonorrhea forty years ago. Was complicated with an epididymitis. Received practically no treatment. For some time afterward noticed that his semen was rust colored. This condition as well as any discharge disappeared and at the age of twenty-five years was married. Considered himself in perfect health and remained so until April, 1916, when he complained of headache, drowsiness and dizziness. Appetite was poor but his functions apparently active. On account of marked malaise quit his work and the following day, apparently fully thirty days after onset, had a chill and temperature. His physicians regarded it as a toxemia and later as typhoid fever, but after observation concluded that he was suffering from a pyelitis. Gradually headache and fever left him but he continued to feel weak and tired and he has never since then regained his full health. No urinary nor sexual symptoms. His examination—heart, abdomen, lungs were negative. Hg. 94% R. B. C. 4, 570,000 W. B. C. 5920, Bl. Pr. 146. X-ray examinations negative to calculi and enlargement of kidney. Reflexes normal. Urine—turbid, with typical appearance of bacteriuria and with few shreds, these showing pus; no other abnormal findings except bacteria in the urine.

At the next visit the anterior urethra was thoroughly massaged and irrigated and shreds obtained which were shown to consist of pus. Catheter introduced into the bladder under sterile precautions, and urine thus obtained was slightly cloudy. Bladder irrigated with sterile water and rectal examination made, prostate showed a regularity, hard but very sensitive and bladder again irrigated. After this the vesicles were palpated and Felehis' instrument used to strip them. In all instances cultures positively showed colon bacillus. It was later demonstrated that no retention of the bladder existed. Particularly in the secretions from the vesicles could pus as well as a few red blood corpuscles be demonstrated.

He was put on systemic treatment as will be described later, inclusive of vaccine treatment. At the same time the common and systemic local treatment was given. In June, 1918, his condition was practically the same as apparently following what he considered the onset.

As he had never been examined for life insurance and never had occasion to have his urine examined it is not known whether or not the bacilluria existed previous to his sickness of April, 1916.

Group 2. G.861. Female, married, aged 28 years. Seen April, 1917.

Considered herself perfectly well until pregnancy set in. About fourth month chills and fever set in which repeatedly occurred with pronounced urinary symptoms. In April, May and June ureteral catheterization, double sided, was carried out seven times. After each time a distinct improvement followed. End of June a healthy child was born. Diagnosis of pyelitis of pregnancy was made. Since then the urine has been free from pus; the urines separately collected have always given pure cultures of colon bacillus only on the right side—however during preg-

nancy both sides were involved. I might add that the phenolphthalein test shows no difference as regards the two kidneys. The urine passed per urethram has the typical appearance of a bacteriuria.

Her chief complaint is feeling of fulness and burning sensation over the lumbar regions. Has practically no urinary symptoms. Generally she feels tired and sleepy at all times. The usual medical and vaccine treatment carried out persistently has given no relief. Her appearance is good and in general considers herself well except for the malaise. There have been no recurrences as regards chills or fever since childbirth.

Group 3. H.1131. Female, married, aged 59 years. 2 children. Seen April, 1918.

The only previous illness, operation for cancer of the breast one year ago. Three years previously recalls an attack of frequency of urination, however, only lasting a few days and passing over without any attention. Shortly before operation, complained of discomfort after urination resembling a tenesmus, which would persist for ten to fifteen minutes. Obligated to urinate about every two and a half hours day and night and considered the tenesmus more severe during the night and early morning hours.

Examination completely negative. Cystoscopically no abnormal findings. Ureteral catheterization at three different times, four weeks apart, showed a perfectly clear urine but growths of colon bacillus were obtained each and every time from both kidneys. No pus present in bladder nor kidney urines.

Although no reason to believe any abdominal conditions, nevertheless gastro-intestinal, and vaginal antiseptics with all general directions advised, auto-vaccine treatment was instituted.

Group 4. W.14. Age 45 years, married. Seen February, 1901.

First and only gonorrhea at age of twenty years. No known complications. For past five years has had slight urinary symptoms, consisting chiefly of frequency, pain at end of act, and burning sensation along course of urethra. Otherwise considered himself well. His condition was diagnosed as tuberculosis of the kidney at this time.

General examination practically negative; cystoscopically an ulceration of the bladder wall over right seminal vesicle. Ureteral catheterization at this time showed urines free from growths. The bladder urine showed colon bacillus and a staphylococcus albus on repeated examination. The vesicles were easily felt per rectum and were rather infiltrated and sensitive. He was put on the usual treatment for vesiculitis and later operated on intravesically. Thorough electrocauterization and bladder irrigations. The ulcerations gradually disappeared and in the last 15 years there is no retention and no pus in the urine. His urinary symptoms are identical but gradually symptoms of malaise and lack of ambition, headache, backache with varying intensity have appeared and continued. Only hexmethylenamin in moderate doses gives any relief. Naturally general care is given but vaccine or other forms of medication give no relief whatsoever. Dur-

ing all these years I have had opportunity to observe and treat him most carefully. There have been no other ailments of any kind during this period of time.

It is needless to state that for the bacteriological examination of the urine neither special methods are employed nor do the principles differ from those employed in the bacteriological examination of other fluids obtained from the body. It is expected that the investigator be sufficiently thoroughly informed of the clinical bacteriological examinations which have been recorded in the literature in order to carry out the work in a recognized manner. It is not sufficient simply to examine hanging drop or stained specimen but bacteriological examinations of such character must be carried out as will positively identify the character of the growth. This means the more the characteristics of the growth are observed and the more methods employed in the differential diagnosis, the more accurate the results.

Furthermore the bacteriological examination of the urine, if it is to be of any value, necessitates the most scrupulous care in the collection of the specimens and again presupposes scientific knowledge of the technic required in order to obtain the urine uncontaminated from the particular part of the urinary tract under investigation. In other words the introduction of germs with instruments as carriers must be avoided.

The technic has been the usual one, as employed in surgical procedures.

1. Sterilization of instruments. All metal as well as rubber goods and glass containers are kept in boiling water for fully 10 minutes. Bottles and test tubes with their stoppers are sterilized in dry heat for 15 minutes at a temperature of 215 degrees F.

Ureteral catheters are always thoroughly washed with cold water and soap, running water allowed to pass through for 5 minutes and then dried and put into an autoclave for 3 successive days at a pressure of 5 lbs., and temperature of 220 degrees F. for 5 minutes each day.

Cystoscopes, the parts which may be put into boiling water are sterilized in this way. However the light carrying part as well as the part carrying the lens cannot be sterilized in this manner. After use always thoroughly washed with spirit of green soap and cold water, then cleansed

of the soap, and immersed in 5 per cent carbolic acid for one hour, then allowed to dry and wrapped in sealed metal box containing formalin vapors. Must be freed from these before use. The usual precautions, of sterile catheter covers, either rubber tubing or linen sheaths, are to be used in routine work.

The lubricant and the irrigating fluid must be known to be free of bacteria. It is always advisable to do control work, and it is always necessary to check up from time to time the instruments, particularly cystoscopes and ureteral catheters and syringes and all other instruments, containers, etc., which are used in work of this kind.

2. Operator and assistants. It is to be insisted that operators as well as assistants and nurses, be protected with gowns, head gear, rubber gloves and the same precautions used as in major operative work. Particularly in connection with ureteral work I insist on the operator being particularly protected to prevent contamination from mouth, nose or hair, and in addition ureteral catheters must be taken care of as already mentioned.

3. The field of operations. In the male the scrotum, penis and particularly the glans and external urethral orifice as well as the pubes, thighs and perineum are thoroughly scrubbed with soap and water, then washed with 1-10,000 bichloride of mercury solution and dried. In the female the washing of the external parts should be preceded by a vaginal douche of weak lysol solution.

In the male, if the urethra is not being examined for bacteria, it is desirable to flush thoroughly with irrigator and nozzle at low pressure with 1-5,000 oxycyanide of mercury solution. In this manner instruments whether used to obtain urine from the bladder or higher urinary tract are at least introduced into the bladder with as little possibility of introducing bacteria as can be carried out. There are those that prefer to cleanse the urethra with the aid of a syringe and catheter. In control work even the anterior urethra can be irrigated with colored solutions or with solutions which will give a chemical reaction in order to be positive that there is no introduction of bacteria into the bladder from the urethra.

If ureteral catheterization is to be undertaken the bladder must at least be mechanically freed

from all debris, shreds, pus or blood or tumor masses that may be adherent or free in the viscus. Sterile water should be used for this purpose.

When doing ureteral catheterization one should not blindly try to catheterize but the orifice must be distinctly seen and the top of the catheter so directed that it passes directly into the ureteral orifice without coming in contact with any portion of the bladder.

In women, the external urethral orifice is thoroughly cleansed; as a rule, the urethra receives no attention and bladder urine and urine from the higher urinary tract is obtained as in the male.

Occasionally bacteriological work of the urethra must be carried out. Here secretion after thorough cleansing of the external urethral orifice may be obtained by lightly stripping the urethra. Again it may be obtained through a urethroscope, from the point desired. In some instances the urethra may be cleaned before the introduction of the instrument. If secretions from urethral follicles are to be examined, the urethra is first irrigated, then as large a diagnostic instrument is introduced as the external orifice will permit, pushed back into the bulb and with forefinger and thumb thoroughly grasping the urethra just in front of the bulb portion of the instrument, the instrument is gradually withdrawn and the glands are expressed. Or the Kollmann scrapers may be used for the same purpose. If no secretion at the orifice, the urethra is again irrigated and the wash water is examined. Whenever the secretions of the adnexa, whether one portion of the prostate or from one of the vesicles or from all parts are to be obtained, that portion is thoroughly stripped after the patient has been allowed to empty his bladder voluntarily and thus cleansed his urethra. Then urethra is irrigated and a urethroscope is introduced into the posterior urethra. Sometimes the quantity of fluid expressed is so great that it partly passes into the bladder. I have frequently seen this in cases of bacteriuria where the origin is in the prostate or vesicles, and the specimen could be obtained by introducing a catheter into the bladder. Naturally one would have to be informed of the character of the urine from the kidneys before obtaining it in this way.

To be Continued

CHAS. E. PARKER, M. D.,
STERLING, ILL.

It is not my intention to go into the history of this operation or to add anything new to the technique of same. It is too large a subject if taken as a whole to do justice to in one paper, and I merely wish to present the possibilities of the operation in these border-line cases that are being taken care of in the same old procedure that has held good for years, carrying with it the high CESAREAN SECTION.

mortality to the child and leaving the mother in a semi-invalid condition. If by the presentation of a few cases and results of same I can induce a widespread discussion of the subject, I shall not feel that the hour has been wasted.

I believe any operator should have a general order of execution for any operation, deviating only as the exigencies of the particular situation he has at hand would demand. I feel that the mortality of both mother and child could be greatly lessened from the appalling figures we are now compelled to face if each individual practicing obstetrics would have a definite plan for each group of conditions. I believe every pregnant woman should be examined two weeks before expectancy to find out the position, presentation of child, and dimensions of the birth canal. In a case where the head is low in the pelvis at the examination and the position, presentation and dimensions are correct, a feeling of assurance is given the examiner and he can impart the good news to the expectant mother. Where we do not find these satisfactory symptoms, and it is these cases where the above is not found that make up the majority of our casualty list—where the expectant mother is not forewarned but is usually in labor two or three days before a physician is called; a brow presentation with a slightly contracted outlet; a shoulder or hand or foot, with normal outlet; a normal presentation with contracted pelvis—all these should be known in advance and when labor first begins, use whatever means the case demands. If the physicians and public at large could be educated up to the point of seeing that every case is not a physiological but a pathological process, we would not have the inexcusably high mortality to both mother and child that we are now responsible for.

Cesarean section as a means of greater efficiency in reducing mortality has, I believe, a dis-

tingent place in obstetrics. Just what constitutes a clear case for this mode of delivery outside of definite obstructions to the outlet of the birth canal, organic lesions of the heart, new growth and placenta previa centralis always was and no doubt always will be a subject of controversy.

We hear a great deal about the mutilation of the mother and the sad state of her condition following this line of delivery, but if properly performed and with even the after care that follows a normal labor she, in my estimation, is in far better physical condition than the mutilation that is generally done following the old line of procedure in the *difficult* cases.

The following cases show merely the type that any one meets with in a general run of labors that a person doing general medicine and obstetrical works meets with in any community in this state. It shows that when we have a normal condition in the subsequent pregnancies that they have been taken care of in farm houses with only kindly disposed neighbor women to assist.

Case No. 1. Mrs. McK., March, 1916, primipara, full term, narrow pelvis with face anterior and no attempt at engagement; rigid cervix. A living child was delivered by Cesarean and she was again delivered of a normal sized child in a normal way in November, 1917, with a normal presentation and position.

Case No. 2. June, 1916, Mrs. C., 2-para, full term, with edematous feet, legs and face, urine loaded with albumen. Purging, sweating and alkalies made no impression and with beginning edema of the lungs under gas anesthetic a cyanosed child was delivered alive but died some six hours later, the only child we have lost in this form of delivery. In 1917 she was delivered in a country home of a normal sized child with a normal position and presentation.

Case No. 3. Mrs. A., 1916, primipara, full term, normal pelvis, but urine sp. gr. +1.001; headache, no albumin, dry, hot skin, sweating and purging did not relieve headache, and edema of lungs seemed imminent, cervix rigid. Under gas we delivered a live female, normal in all respects and in 1917 with a normal position and presentation a living child was delivered without any complications. I believe statistics show that only about two per cent of these cases have any difficulty in succeeding normal deliveries.

Case 4. May, 1915, Mrs. D, 2-para, with a history of bad maceration of first child which was delivered dead. We found a contracted pelvis that would not admit the passage of a living child, and delivered a living child by the first Cesarean that was ever attempted in Whiteside County. In 1918, at full term, Dr. Perry again by Cesarean section delivered a living child and stated the old scar was firm and in excellent condition.

Case 5. In 1917, Mrs. K., aged 39 years, two chil-

dren living, aged 11 and 9, both normal labors. Full term after normal pregnancy when pains of a cutting nature severe enough to keep her awake had kept up for several days. Examination showed normal sized outlet, rigid cervix and chin felt up under pubic bone. Cesarean section under ether, a living male child was delivered and mother left hospital on ninth day.

Case 6. Mrs. J., primipara, full term. Convulsions almost continuous from midnight until nine a. m., under gas anesthesia a living male child was delivered and mother and child both made an uneventful recovery.

Case 7. Mrs. R., a primipara, full term, contracted pelvis, with shoulder presentation. Ether anesthesia, a living child was delivered and mother left hospital on 15th day.

Case 8. Mrs. McA., 2-para, full term, flat pelvis, delivered of dead child some sixteen months previous. Present condition, breech presentation with rigid cervix, a living female child was delivered. Uneventful recovery.

Case 9. Mrs. R., primipara, full term, contracted pelvis, cervix rigid, whole uterus in state of tetanic contraction. Amniotic sac ruptured before pains began, continuous contraction of the uterus during the making of the incision into uterus which had to be extended through fundus in order to extract child.

Case 10. January, 1916, Mrs. K., previous history: fourteen months ago delivered ten pound dead male child. Result of tetanic contraction of the uterus. Present condition: full term, cervix rigid, outline of child and uterus plainly palpated through abdominal wall. Ether anesthesia, a living male child was delivered, uneventful recovery followed.

Case 11. Mrs. S., October, 1916, 3-para. In the two previous confinements was in labor three to five days followed by the death of both children at birth, an epileptic whose attacks were always aggravated by pregnancy. Present condition: full term, rigid cervix, brow presentation, convulsion epileptoid in character. Gas anesthesia, a living female child was delivered.

Case 12. Past history: twelve years ago I was called in after she had been in labor twenty-four hours and found contracted pelvis, face presentation, amniotic sac ruptured, very feeble, rapid fetal heart sounds. Forceps delivery, complete laceration, unable to resuscitate child. Present condition: Examination showed face presentation, contracted pelvis, fetal heart sounds very good. Ether anesthesia, a living female child delivered with uneventful recovery.

Out of a multitude of modifications that have been so well worked out a person has a wide range to choose from and can find just the technique to suit the individual taste or as the case demands. Generally speaking, I make use of the high incision in the abdominal wall and start it about two

inches above the level of the umbilicus and at the outer margin of the right rectus extending it down four (4) in. in length or two inches below the level of the umbilicus, the uterus is drawn so that the center of the anterior wall is directly beneath this.

Wet laps are packed around the margin of the abdominal incision and down around the uterus. This successfully walls off the intestines and omentum. The incision in the uterus is made in the anterior median line and is extended down to the amniotic sac and far enough up to admit two fingers of the left hand which protect the sac while the incision is made about four inches in length with a pair of heavy, straight, blunt scissors, between the fingers which protect the sac in about the way we protect the abdominal contents while extending the opening in the parietal peritoneum. The length of the uterine incision depends upon the thickness of the wall and size of child to be extracted. The feet are grasped with the left hand and as they are drawn out of the uterus a towel is thrown around them which greatly facilitates the extraction of the after-coming body and head.

Where the complication exists of the placenta being located upon the anterior wall of the uterus which occurs in a large number of cases, especially of abnormal positions or presentation of the child, it is readily recognized by the doughy feeling and more haste is required in opening the uterus as it must be made through the base of the placenta as it often occupies the whole anterior wall of uterus. With everything in readiness the incision is made with one stroke of the knife and the hand, plunged through the *placenta*, grasping the feet of the child, which is extracted in the usual way. Time is the most important point in mind and the twenty or thirty seconds it requires to deliver the child does not endanger its life or add to the work of resuscitation. The cord is clamped with two forceps and cut between them and the child is passed to one of the assistants or nurse, by grasping the uterus at the upper angle of the incision the fundus is raised out of the abdominal cavity and the assistant grasps it above the cervical junction, which greatly lessens the hemorrhage, the operator sweeps his right hand around the margin of the placenta and enucleates it. The placental site is mopped with a wet lap and all

shreds are thus removed. At this stage C. C. pituitrin can be injected into the body of the uterus in three sites, one-third C. C. in each site. A cat gut suture is now run around the incision just outside the mucosa in a purse string and tightly drawn, which usually shuts out all hemorrhage from the incision, and greatly facilitates the work of closing up the uterine wound. Three layers of cat gut suture interrupted are placed in the uterine wall, which closes it very satisfactorily. The abdominal cavity is now wiped out with wet laps and the abdomen closed without drain unless the patient has been in labor for sometime or the amniotic sac ruptured previous to operating. The usual time of delivering the child is about four minutes, twenty to forty minutes completes the operation.

CONCLUSIONS

I am satisfied every baby in this series of cases would have been lost if left to the old way of handling them, judging from my past experience with similar ones. Fifteen cases with all the mothers saved and only one child lost and I cannot feel that the operation increased its hazards any, but feel sure that had operation been resorted to earlier, its chances **could have** been improved.

With the high incision the chances of post operative adhesions are lessened. Organic lesions of the heart, new growths and malignant complications, placenta previa centralis, slightly contracted pelvis with abnormal presentation, normal presentation with the decided narrowing or exostosis of the bony outlet, uncontrollable symptoms of approaching eclampsia, eclampsia present, without cervical dilatation—in fact any condition that jeopardizes the child's life should in my opinion submit to this form of delivery.

Don't's.—Do not attempt to operate on any case that has been in labor for any length of time and who has been subjected to a number of vaginal examinations or where an attempt to use forceps has failed.

Do not attempt to operate where the amniotic sac has been ruptured for several hours. Do not attempt to perform this operation without plenty of help, especially in the desperate cases where one is required to resuscitate the child.

Do not use pituitrin in post complications, as it may tear out the uterine sutures.

DISCUSSION

(Abstract)

DR. LEWIS (Chicago) noted that Cesarean section is really an easy surgical operation, but that we should not allow the fact that we are expert surgeons and the fact that it is an easy operation for the surgeon to bring us to do it when it isn't indicated for obstetric reasons. That is why we obstetricians used to think that the Cesarean section was an operation for the surgeon, and we took pride in getting cases out in the natural way. It is a wrong thing to go too long with forceps, to use the natural passages for the extraction of a child by obstetrics just because that is the correct way to do it. The delicate point is to get to your Cesarean section when it is indicated. He noted that though rigid cervix was mentioned in three cases in only one case does it seem to be the main indication for the operation.

In his opinion rigid cervix does not occur anywhere near as often as it is reported. A great many cervixes are rigid, but time softens them down.

We want to make sure that we have our obstetrical diagnosis before we attempt to do a Cesarean section, or indeed any other obstetrical procedure. The diagnosis must be made by just as careful work before the woman is delivered as we would do in any kind of a medical or surgical case that came to us for any purpose. We must use our stethoscope for the fetal heart; we must use our pelvimeter, which to the obstetrician is just as important as the stethoscope, and the blood pressure apparatus to the internal medicine man, and we must know that we have indications of a proper time.

Comparing Cesarean section and the use of high forceps, he has always looked upon a high forceps as a very dangerous procedure, for even the most expert obstetrician.

DR. MUNSON (Springfield) regretted that instead of putting off the pelvimetry, the measurement of the pelvis, until two weeks previous to expectancy, that this be done as early as possible when there is known pregnancy.

He related the case of a very obese patient with contracted pelvis who had borne two dead babies, one removed by crushing the cranium. In this case he advised that she come to the hospital on the first of April, one month before expectancy, and that premature labor be induced. This baby was born spontaneously and is now well at the age of two months.

DR. CULLEN (Peoria): It so happened that this morning I did a Cesarean section for an entirely new indication to me. They telephoned me at the St. Francis about eight o'clock that there was a patient up there that needed Cesarean section. I went up and found that the patient had pulmonary edema. She was sitting up in bed but blue, and the pulse was very good, considering everything else. Dr. Jackson of Kansas City was with me and Dr. Beck of Chicago and Dr. Kryder of Springfield and some other gentlemen. They all saw the patient and

they finally decided that she would surely die if something wasn't done and they all advised me to do the Cesarean section, which I was rather reluctant to do. We took the patient to the operating room. The minute she was placed in the prone position she choked right up and began to get blue and coughed, so we had to elevate the head of the table at forty-five degrees and then had to put pillows under her back and head so that her head could be almost upright, and under those conditions, with her in that position, we did the Cesarean section under local anesthesia with a great deal of oxygen and a little bit of gas. About an hour ago I telephoned. The patient is doing well although the edema hasn't entirely cleared up. I don't know what the outcome will be, but it was a new indication I thought I would mention.

DR. PARKER (closing the discussion): As I mentioned in the paper it is a very difficult point to decide just the dividing line between what should be a Cesarean section and what should not be. I think that a person should be judged a great deal by the history of your previous cases of where these border lines should be made. I do not believe that any case should be delivered by Cesarean section that could possibly deliver a living child otherwise, but the child has as much right to live as a mother has in my estimation, and if either one or the other had to die I believe that the child should be saved.

I have never saved a child in my life by high forceps. The child may be delivered but dies a short time afterwards from exhaustion or other causes. The results of rupture of the uterus are present in about two per cent of the cases. Dr. Munson spoke of this and where they have a normal pelvis, with a normal position and presentation, there is very little danger of even encountering this two per cent.

Of the cases of edema, I believe I mentioned that there were two, one was a decided case of edema.

ELONGATION OF THE TRANSVERSE PROCESS OF THE FIFTH LUMBAR VERTEBRA AS A CAUSE OF BACKACHE.

SYMPTOMATOLOGY AND TREATMENT.

J. R. LAVIERI, M. D.

Columbus Hospital.

CHICAGO.

Elongation of the transverse process of the fifth lumbar vertebra, although not very common, occurs with sufficient frequency to put us on the alert in cases of severe lumbar pain.

This anomaly was first brought to our attention as a cause of backache by Drs. Blanchart and Parker in an article published in the *Journal of*

Orthopedic Surgery in 1915, in which several cases were described.

The degree of elongation varies from a slight deviation from the normal, causing no symptoms, to a marked extent impinging upon the posterior surface of the ala of the ilium, causing excruciating pain in the back.

The elongation may be bilateral or unilateral. Occasionally are encountered cases in which the constant friction and pressure upon the ilium cause what may be called a pressure osteoperiostitis, resulting in union of the tip of the process with the ilium.

The etiology has not been definitely determined, but occupation probably plays an important role. It is of significance that all of my cases have been in laborers whose lumbar muscles have been under great strain for years; also, that not only the transverse process of the fifth, but those of all the lumbar were enlarged to some extent. It is reasonable to suppose, then, that the constant pull of the lumbar muscles on the tips of these processes may have considerable to do with the excessive growth.

The report of the following case will bring out the symptoms found in this condition:

Mr. D., aged 45 years, always has been healthy until present trouble began. Family history negative. Venereal history negative. Laborer on railroad since boy.

Present complaint began about fourteen years ago with backache, relieved by rest, never relieved by medicines; although he had consulted a number of doctors. Backache at first not very severe, but gradually became more and more severe, until he had to lay off work and rest for several weeks at a time before he would feel relieved. It became progressively worse, until at the present time he is unable to get up from sitting or lying position or to walk without assistance. Pain more severe on right side, and made worse by leaning toward right side. Relieved somewhat by leaning to the left.

Examination: General examination negative. Muscular, well-built man. Stood leaning toward left side; motion to right so painful as to bring tears to man's eyes. Motion backward also painful. Palpation showed a definite tender area halfway between the spine of fifth lumbar and posterior border of ilium on right side. X-ray examination showed a long right transverse

process of fifth lumbar vertebra. Lumbar spine bent toward left side.

Operation: Incision about six inches long made about one and one-half inches to right of spines of lumbar vertebra extending several inches below tender area. Lumbar muscles separated by blunt dissection and retracted. Fifth lumbar vertebra located and right transverse process cleaned free of all muscles and periosteum.

With small, sharp chisel directed with tip of finger, the transverse process was chiseled off; the muscles allowed to fall back and lumbar fascia closed with catgut; skin sutured with black silk. Small cigaret drain left in to take care of muscle oozing.

After-Treatment: Patient allowed to lie on left side for first few days; then allowed on back rest. Drain removed within forty-eight hours. Allowed to be up for few hours on tenth day, increasing length of time daily. Discharged from hospital on fourteenth day.

From the first day allowed up, patient felt hardly any pain in back. On day he went home he walked out of hospital as well as any man; all pain had disappeared; he could move well in all directions without any pain.

This was in January. He left for Italy early in March, and I had word lately that he is perfectly well.

Summary: Elongation of the transverse process of the fifth lumbar vertebra impinging upon ala of ilium causes a severe type of backache, and often renders patient bedridden. All cases have tender area between fifth lumbar and posterior border of ilium on affected side. Motion painful and restricted in side affected. Pain relieved by leaning toward opposite side.

Operative procedure offers quick and lasting cure. Success of operation depends upon:

1. Wide exposure of operative field.
2. Clearing transverse process of muscle attachments and periosteum.
3. Careful chiseling of offending process so as not to injure nerves.

1104 North Kedzie Avenue.

NICOTIN IN CIGAR SMOKE

Nicotin, which exhibits a toxicity of high degree, is volatile. Why the tobacco which contains it does not cause greater evidences of pronounced poisoning than are observed in the ordinary smoker has been a mystery. The traditional explanation has been that

nicotin is destroyed in the process of smoking, and that the combustion products, real or conjectured, are far less toxic in their character than is the tobacco alkaloid itself. There can no longer be any doubt however, that the nicotin is by no means completely burned up in smoking, for there is valid evidence that more than one third of the volatile poison can be recovered in the smoke.

Various schemes have been employed or recommended to eliminate the nicotine menace of tobacco without making it necessary to give up its use. Among these are the production of so-called nicotin-free cigars. They have never attained any recognition in this country, although serious attempts have been made to introduce them in some of the European countries. One product has represented the result of extracting the tobacco to remove the alkaloid. As other valued aromatic properties of the plant are thereby likewise removed, such detoxicated tobacco has never attained popularity. Another method has consisted in "fixing" the alkaloid by a treatment which forms the insoluble nicotin tannate. Tobacco treated in this way may, on ordinary chemical analysis show a low content of nicotin; but this does not prove that the nicotin may not be liberated into the vapors in some degree when the tobacco is smoked. Experiment shows, in fact, that it actually is. Another procedure has been to introduce iron chlorid near the butt end of the cigar with the object of making it retain some or all of the volatile nicotin that passes through this portion as the smoke proceeds into the mouth of the smoker. Here, too, critical investigation has revealed the failure to prevent the exit of nicotin, at least in such cigars of this type as have been offered for sale to date.—J. A. M. A.

SOME STATISTICS OF THE PASTEUR TREATMENT

"There appears to have been no recent thorough examination of statistics of the results of the Pasteur treatment, owing probably to the relatively small number of cases which have occurred in Western Europe in recent years. In India the disease is so much more common that the Government has established a series of Pasteur Institutes to which persons bitten by animals, chiefly dogs and jackals, proved or suspected to be rabid, are sent. In the report of the Pasteur Institute, Kasauli, for the year ending 1917, we find that 293 persons bitten or licked by animals proved to be rabid, were treated, with 6 deaths, a percentage rate of 2.05. It should be added that only 58 of these were bitten through clothing; of the others, 19 were bitten or licked on the head or face, and 216 on other parts of the body. Among 105 Europeans, 35 were bitten or licked on the head or face, and 93 on exposed parts of the body; there was only 1 death, a percentage rate of 0.95. Among 188 Indians, 14 were bitten or licked on the head or face, 123 on exposed parts of the body, and 51 were bitten through the clothing. There were 5 deaths, a percentage of 2.7"—(*British Medical Journal*, May 3, '19).

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EDITOR

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October, 1919.

Editorial

STANDARDIZING THE MIND.

The recent atrocious crime committed by a sexual pervert in Chicago, together with other outrages against society occurring from time to time, has temporarily at least aroused the public to the necessity of establishing some method of control of the dangerous element in the community known as morons and mental defectives.

The present agitation in all likelihood will

begin and end with talk. The movement has at least approached the stage where several committees have been appointed to work out the solution of the problem and we hope that some important constructive work will result therefrom.

Unfortunately, the movement for a better control of mental defectives has been largely dominated and directed by laymen who in most instances are incompetent to handle this complex medical problem and aside from their incompetence their chief interest in the matter is largely an insane desire to see their name in print. This latter feature has been the cause of much harmful publicity and the cause for much trashy literature on the subject placed before the public.

The present Narcotic Drug law is a conspicuous example of the harm that can be done by allowing laymen to direct the enactment of laws for the control of medical problems. We are today reaping the whirlwind of the sowing done previous to the time the Harrison Narcotic Law was enacted. As medical men, we should profit by our previous mistake in allowing medical problems to be sponsored by publicity seekers. We should awaken to our responsibility to the public in this very important matter of the proper solution of the moron problem, and help direct the enactment of laws and regulations along scientific as well as practical lines.

Standardizing the mind presents a most difficult problem. Who of us can define with absolute certainty the standard of conduct below which no one can sink without incurring general censure? We have to acknowledge that in order to judge an individual's intelligence it is necessary to have in mind some standard as to what constitutes normal intelligence. What standard then is to be established? What mind or minds will be used as a criterion by which men are to be measured? A mind that one examiner might consider subnormal, another might classify as genius. You can prove by almost any neurologist that everybody is crazy. The situation reminds us of the old Quaker who said to his wife: "I believe, Jane, that all the world is queer, but Thee and Me; and sometimes even thou art a little queer."

In attempting to draw the line between the normal and subnormal, the wholly responsible and the semi-responsible, we are confronted by

members of society whose standards of ethics differ and there is at present no supreme authority on morals to which appeal can be made. The legislature can declare what is legal and what is illegal, but apart from the law every man has the right of private judgment upon questions of morality, and is almost sure to exercise it.

Another phase of the matter that should not be overlooked is that a considerable share of crimes of violence are committed by subnormal boys and men, for the most part high-grade morons. It is here that we meet the border-line defectives, a most dangerous class and the one that presents to us the problem that is hardest to solve. It is also in this class that we find the cases that fall near the boundary line between that grade of mental deficiency which will be generally recognized as such, and the higher group usually known as normal, but dull.

It can be said with certainty that there is no definite dividing line between normality and feeble-mindedness, nor between normality and genius. The number of mentally defective individuals in a population will depend upon the standard arbitrarily set up as to what constitutes mental deficiency; similarly for genius.

Every case is potentially different from every other case, and calls for individual study. There is no question but that different men have different degrees of capacity for mental and moral training. All cannot be held equally responsible ethically, but the minimum limit of obligatory response to social and ethical demands necessary to rank one as within the pale of normal conduct is at such a level that any one not an actual defective can, in a reasonably favorable environment, surmount it.

There are many tests available for use in examining suspected mental defectives, but the difficulty lies in the fact that not one of these tests can be called conclusive, nor can they either singly or combined be relied upon in the absence of clinical and other evidence, and as it frequently happens the detection and segregation of morons before they commit crime is a terribly difficult matter.

But having once decided the question of normal mind or defectiveness, the solution of the problem is complete segregation providing it can be brought about. Under existing laws a man cannot be incarcerated until he has committed a

crime and then not until he has had a trial before a jury of his peers. Even after conviction has been secured, defects of law, mushiness of public sentiment and the ever present political pull combine to keep these fellows at liberty. It is extremely difficult to send one to prison, and still more difficult to keep him there.

In view of the above we can hope to accomplish little by way of the segregation route for morons and mental defectives until our present system of trial and commitment is changed. Our present jury system of dealing with defectives should be abolished and in its stead there should be appointed a commission of medical men acting under the authority of the court.

DEPORT THEM, WHY NOT?

Mr. Caminetti, Commissioner General of Immigration, says that the Federal Government will charter a ship and deport some thirty-six hundred undesirable aliens. It has been said that among the number scheduled for deportation there are a few doctors and a like number from the other learned professions.

Commenting upon this the writer was asked, if, in his opinion, a physician who had become established in this country, who had built up a clientele and is doing excellent scientific work, should be deported for cause the same as other alien enemies. We say emphatically yes, we can see no reason why creed, color, trade or profession should alter the situation in the slightest degree.

In order to more thoroughly safeguard society, there has been of late a great deal of agitation for the purpose of enacting laws for the control of morons and mental defectives. Why should society not have the same safeguards thrown about it to protect it from the enemies of our country? Of the two undesirable elements the latter is the more dangerous, because they are a menace to our free institutions and likewise keep alive a steady pollution of our social life.

No doubt a goodly proportion of the thirty-six hundred to be deported will be composed of the interned enemy aliens. With the return of peace these men must be released, but we can see no reason why they should be permitted to stay in this country whose hospitality they betrayed. We ask in all charitableness why should any leniency be shown a physician who

committed treasonable acts or uttered seditious remarks against the government?

During the war the government was more than lenient in exercising its rights to confine these people. It interned them only when their dangerous character was no longer open to reasonable doubt. In Great Britain and in the European countries a goodly share of them would have faced the firing squad. America saw fit to adopt a milder method, perhaps to the detriment of the country, for the reason that soft pedaling encouraged disloyalists who remained at large, spreading sedition, some walking even on the very edge of treason.

The writer is forced to admit that during the world's war too many physicians were at all times under the watchful eye of the government. I use the word too many advisedly (even one is too many). There should be no disloyal doctors. Like Caesar's wife the doctor should be always above suspicion. Because of his close association with people and his ready access to the homes no class indulging in seditious talk is more dangerous than is the physician.

The writer has been unable to analyze the psychology of disloyalty to America on the part of some foreigners who, because of oppression and inability to earn a livelihood at home, come to this country to take advantage of the greater opportunities open to them for the accumulation of money and the exercise of the freedom of initiative and independence denied them in their native land.

The writer knows of several instances of people coming from foreign countries, poor and sometimes penniless, that rapidly accumulated wealth and affluence in America, yet their sympathies were not with America during the great war. In this connection two instances come to the writer's mind as being typical of many others. A quarter of a century ago the writer became acquainted with two young men who were poor and who had just arrived from Europe. Quickly taking advantage of the opportunities open to them in America, they formed a partnership and went into business; they accumulated wealth rapidly and both became millionaires. One died very recently worth approximately five millions of dollars. Neither thought enough of America, that permitted them to make millions in a few years, to take out naturalization papers

until they were here twenty years, and then not until they were forced to do so because the building code of a certain city required citizenship before granting the applicants permission to erect a building costing several hundred thousand dollars. During the late war both these gentlemen sympathized with the mother country, and expressed the hope that America would lose. As a relative of one expressed it, "it is a wonder both were not interned for fifty years."

Now that war is over and we are entering into a period of readjustment, the subject of desirable citizenship has to be settled so as best to protect the future welfare of our country. When we come to deal with the interned alien enemies we can see no reason why mildness should degenerate into softness, no reason why men who flouted American interests and duties in time of war should be permitted to gather American dollars in time of peace.

It is particularly unfair to the loyal citizens of foreign birth to draw no distinction between them and the person who was shown to be in heart, as well as in name, an enemy to the public.

The war revealed to us a condition at home we never knew existed and perhaps never would have discovered until it became so strong it might have destroyed this country. We were surprised to find that even in our own midst men living under the Stars and Stripes, some born under our flag, having all the privileges of education and of freedom of action in every way and all the advantage of a great, prosperous, productive country, were not Americans at heart; they did not belong under the flag at all, they were absolutely rebels against the government they were living under.

Today a still greater problem confronts us. We are living in a world remade. The abyss between the past and present staggers memory. But the greatest change of all in the hearts and minds of people is a new conception of human life, its relations and its responsibilities.

The reaction that always follows the tension of war is upon the country, and one of the results is a passionate confusion that bodes ill for domestic peace. The country is grieved at this exhibition of passion, which darkens counsel and scandalizes those who love truth more than expediency or any other form of the chicanery

that has replaced the safe principles that once guided our people.

Pick up any paper or magazine today and note the startling headlines portraying conditions the world over; socialism is manifesting its most radical tendencies, bolshevism is rampant and men are resorting to brute force.

We note as we study conditions here at home that we are threatened with the same dangers (and we must not minimize them), as those under which the old world is struggling, and the noise of conflict comes sweeping across the sea as the bolsheviki and anarchists and radical socialists vie with each other in reaching out for the throat of our brothers. Masses are arrayed against classes in angry contention over problems that effect the very life of the nation and out of the struggle comes nothing but harsh threats and red headlines that add fury to an already furious flame, and this not with the hope on the part of the agitators of achieving directly or indirectly any immediate results except to make themselves martyrs.

Bear in mind that we are not charging this after-the-war agitation in America to pro-Germanism. We regret to have to admit that the great majority of the radicals in this country today, the men with murder in their hearts, were born right here in the United States under the Stars and Stripes. Many of the men who are talking revolutions have no German blood in their veins and a large percentage of them are not pro-German at all. They are simply anti-everything and especially America. They are not for Germany; they are simply against America. As a rule, they are exaggerated egotists, swelled up with their own importance, obsessed with a little puny idea of their own as to how to run the country, and if the other 999 men in the community do not agree with them they want to use a bomb.

We are, therefore, confronted not only with the problems of deporting some of the undesirable recruits we received from Europe, but we have the still more unpleasant duty to regulate some of our own children who have been allowed to drift into unpatriotic channels.

Naturally one will ask, what is the cause of this unpatriotic spirit on the part of our native born, and how are we going to meet it? We don't mind telling you that this thing is not of

a few years' growth; it is not the result of the war; it is deep seated, rooted down deep in the hearts of these men and has been growing for years.

The question and the key to the solution of the problem is, how did it get there? It got there the same as it is continuing to get there every day. By education, not necessarily in our schools, but partly so. It is as easy to overthrow or destroy American traditions and institutions by false teachings as by bomb and red flag. Unfortunately, we have had in some of our schools and colleges in the past what might be called a misguided aggregation of professors of social economy or parlor socialists, who have been for years teaching bolshevik ideas and doing their share of planting the seed of radicalism.

However, education of another kind is the principal underlying cause. It is the education that has been going on for years. The parlor bolshevist has for a long time been running rampant in our midst, sowing dragons' teeth in the field of life. Another, and the most effective method of education, is that carried on by the liberal distribution (usually free), of radical papers into the homes of the working people with five or six children around the table at night with no other periodical. Papers that are simply the exponents of class hatred, papers which from one end of the year to the other never give expression to a word of hope, of respect, but teach the gospel of hate to their fellow men.

The greatest menace to the stability of our government is bolshevism, the monstrous evil now lurking at our doors. Stop to think what bolshevism, the rule of a selfish and criminal, but bold and absolutely heartless minority, might accomplish in the United States (supposing for a moment that it could gain entrance and lodgment here). In Russia it is the rule of terror by a minority, unparalleled in modern history, unequaled perhaps by the savagery of Ivan the Terrible, of Turkish sultans or the Marats, the Dantons and Robespierres of the French revolution. It spells economic, social, political disaster. It is not a revolution, it is a pandemonium. It is a protest against all that man has ever revered. It is an insane revolt against society, reason and God. The introduction of bolshevism into the United States would

mean material ruin and be followed by economic degradation and the attendant political and social anarchy that would lower us to the level of the cave and the jungle man.

We will not admit that bolshevist or hyphenist sentiment in this country is at the present strong enough to cause a real revolution, an armed revolution that would have the slightest chance of success; nevertheless, they are disturbing factors that must not be allowed to gather greater momentum nor allowed to grow to greater proportions. There is no room for these cankers in our midst. Russia is a flaming sacrifice to light the world on the way not to go.

Bolshevism we have got to recognize as the most alarming factor affecting social life, and we should not attempt to minimize our responsibility towards helping to bring up and support a healthy movement for its control. The movement cannot be most effectively controlled by force of arms. We have got to travel the same way the movement is traveling, namely, along educational lines. We have got to educate these men back for love of country; we have got to put into their ears and hearts words which tell something of our country's glory and power, of its kindness and its mercy. And we are going to do it.

You cannot drive these radical papers out of the homes; these people, most of them, have got too far for that; we have got to educate them; we have to give them an antidote for the poison coming into their souls every day.

This can be done by keeping before them a liberal supply of literature of an elevating and patriotic character augmented by the wise selection of teachers. It behooves us now to begin to hunt around and help pick the educators of the future. We cannot shift our responsibility to anybody else's shoulders, the men and women of this country who have been granted the privilege of an education and of culture, must be the teachers to transform the desert souls of these men and these unfortunates back to an appreciation of our flag and our country.

The good loyal doctor, reaching as he does every home, can be the greatest agency for good. This is the doctor's problem. It is everybody's problem. None of us can shift our responsibilities; each and every one must help carry the burden.

ONLY ONE DOCTOR IN THE CONSTITUTIONAL CONVENTION.

So far as we know, only one doctor has been nominated by the several political parties seeking to send representatives to the Constitutional Convention.

The twenty-second senatorial district, consisting of Vermilion and Edgar counties, nominated E. B. Coolley, the only doctor who will sit in the convention that is to revise and rewrite the fundamental laws of our state. Having only one representative in the Constitutional Convention is a serious reflection on the medical profession.

The condition mentioned should never have been allowed to come about. For some unaccountable reason physicians almost universally feel that matters of public interest, even if vitally important to the medical profession, are contentious affairs in which physicians have no right to enter; and the result is that the doctors are always obliged to take what may be left when the scramble is over. In some districts of the state doctors were appealed to to become candidates before the primaries of their respective parties; inasmuch as they failed to do so they have only themselves to blame if they do not get what is due the profession from the body finally elected to revise the constitution of the great State of Illinois.

THE FUTURE OF MEDICINE.

George V. Sheridan, executive secretary of the Ohio State Medical Association for six years, in his farewell remarks gives much food for thought. We wish that every physician could read it. It graphically sets forth and emphasizes the need for organization.

His own view is "that the need for a compact organization is greater, and will be greater as the laws and tendency of legislation become more paternalistic. Whilst the workmen's compensation act did not affect us all, but once the next logical step in paternalism is adopted, compulsory state health insurance, the physicians *must* organize.

"Once the states commence to experiment with the various forms of health insurance, the relation between the physician and patient changes. Now the physician renders the service, and the patient either does or does not pay the bill. Un-

der the proposed laws, the physician renders the service; but his bill is rendered to the state, and the state arbitrarily fixes his compensation, as under the workmen's compensation law."

"So long," he says, "as the old relation existed, there was no particular need of organization to conduct collective bargaining. Immediately we have state health insurance, the future welfare of the profession, the maintenance of honest medical standards and the adequate protection of the sick public in the state will depend almost entirely upon the ability of the profession to organize, for the purpose of collective bargaining. When that time comes, if the physicians do not present a solid front and stand together in their demands for just standards and adequate remuneration, they will be caught between the two biggest forces in the state and crushed. Medical practice will be so lowered that eventually it will be impossible to practice medicine honestly and live.

"These two forces are represented by the employer and labor. The former endeavoring to keep the cost as low as possible; the latter, to demand the maximum of medical benefits. The third vital factor in the scheme, the physician," he says, "will be caught between the devil and the deep, blue sea." The one hopeful factor in the situation will be the organization, and the use of that power to control the situation.

Attention is called to the condition of the medical profession in England under the health insurance act passed in 1912, due, he says, to the lack of organization and the inability, or lack of desire, upon the part of the British Medical Association to properly exert the influence. They have seen their error, and are now endeavoring to mend or adjust the defect.

In the *Charlotte Medical Journal* I find an editorial entitled "Communizing the Medical Profession." The writer quotes Dr. Vincent, president of the Rockefeller Research Bureau, as saying: "Medicine, in the broad sense, is to be one of the co-operating bureaus of the government." He sees the members of the profession as having lost all personal initiative; and he sees physicians and surgeons merely working a specified number of hours in a day, at a governmentally fixed price. He sees the physician having absolutely nothing to say as to whom he will attend, and also sees the patient having absolutely

no choice as to what physician shall treat his troubles.

The writer analyzes the condition, and attributes much of it to the present socialistic craze, the lack of interest in public affairs by physicians, and a neglect of the duty in the past. "And now, looking at the matter," he says, "from the viewpoint of past neglected duties of this kind, one gets the impression that something is about to be handed out because, to the mind of the mob, the medical profession is easy."

"The communistic idea that seems almost sure to submerge the medical profession, has not grown up in a day. It is a sociologic plague, sure enough; but it has some biologic design, nevertheless."

"The world is topsy turvy, and this part of the world is as topsy as any other part of it. Just what the present mental condition of the world really means, one hardly dares hazard a guess; but the communistic idea is so dominant in this country that its study and sane solution is vital to the life of the medical profession, and hence, vital to the life of the nation."

In my thirty years of activity in our state society, I have urged and urged organization, until I feel I have made myself obnoxious to many men. I have talked and written of paternalism and its danger to the profession until I have been called a "pencil pusher." Yet, all this time to no effect. Physicians are too self-complacent, too self-satisfied, and take no interest in the future of the profession. One should be as interested in the future welfare of the profession as in the present. Society's future welfare concerns all; so should our profession.

This tendency toward paternalism is further evidenced by the perusal of the three bills now pending in Congress for the organization of a Department of Public Health, centralizing all public health and hygienic work in the hands of a secretary, to be a member of the Cabinet. No one will deny that many of the activities of the nation and state ought to be centralized, for the double purpose of efficiency and economy. At present we have too many bureaus and commissions, often conflicting and duplicating in authority. An instance of the tendency is noted in the circular today received from the Industrial Commission, limiting the amount of attention and work rendered a patient without special permis-

sion from the commission. This practically forestalls the labors of the physician, as well as his freedom of action. The commission employs, dictates his action, and arbitrarily fixes his compensation. Even the Harrison anti-narcotic law makes the physician bear the odium of its administration.

I am heartily in favor of legislation having for its object the uplifting of mankind socially, morally and physically; but I firmly believe the profession bearing the brunt of this work, and which is most vitally interested in it, both from an economic and administrative stand, should be consulted in its enactment. As it now is, or has been, it has been left to theoretic sociologists, philanthropists, economists and unions.

There has been a steady encroachment upon the medical profession for years. There will be, unless the physicians organize and labor with that singleness of purpose that labor and other similar organizations do. We must organize, for our own salvation. Our troubles today are due to a lack of organization. When will the profession awake? Not until we do will we be able to stem the tide, or stop the conditions that are surely engulfing us.—*N. E. M. A. Quarterly.*

THE HARRISON NARCOTIC LAW ENFORCEMENT IN THE CHICAGO DISTRICT.

The following has been sent to doctors in this district by the collector of Internal Revenue of Chicago. It behooves the physicians to take heed of these instructions when treating addicts or using narcotics.

ENFORCEMENT OF THE HARRISON NARCOTIC LAW.

*Excerpts from M-Mim. 2212 issued July 31, 1919,
By Commissioner of Internal Revenue,
Washington, D. C.*

1. USE OF NARCOTICS IN THE TREATMENT OF INCURABLE DISEASE, OTHER THAN ADDICTION.

With reference to persons suffering from a *proven incurable disease such as cancer, advanced tuberculosis* and other diseases well recognized as coming within this class, the reputable physician directly in charge of bona fide patients suffering from such diseases may, in the course of his professional practice, and strictly for legitimate medical purposes, prescribe narcotic drugs for the immediate needs of such patients, provided said patients are personally attended by the physician and that he regulates the dosage him-

self. The prescriptions in such cases should bear the endorsement of the attending physician to the effect that the drug is to be dispensed to his patient in the treatment of an incurable disease.

Such bona fide cases of incurable disease should not occasion difficulty in the proper administration of the law, and the fact that the patient suffering from such incurable disease is addicted to the use of narcotic drugs should not complicate the matter. In this class of cases, as well as in others hereinafter mentioned, caution should be exercised to avoid being imposed upon by unscrupulous persons, and too much credence should not be given to the unsupported statements of the addict himself, because the confirmed addict will go far beyond the truth in an attempt to secure an ample supply of narcotic drugs with which to satisfy his cravings.

The primary responsibility obviously rests upon the physician in charge of the case. The Bureau manifestly is not charged with the duty of laying down any fixed rule as to the furnishing of drugs or the frequency of the prescriptions in any particular case involving an incurable disease. The danger of supplying persons suffering from incurable diseases with a supply of narcotics must be borne in mind, because such patients may use the narcotics wrongfully, either by taking excessive quantities or by disposing of a portion of the drugs in their possession to other addicts or persons not lawfully entitled thereto.

While the primary responsibility rests upon the physician in charge, a corresponding liability also rests upon the druggist who knowingly fills an improper prescription or order whereby an addict is supplied with narcotics merely for the purpose of satisfying his addiction.

2. AGED AND INFIRM ADDICTS.

Cases will come to your attention where aged and infirm addicts suffering from *senility, or the infirmities attendant upon old age*, and who are confirmed addicts of years standing will, in the opinion of a reputable physician in charge, require a *minimum amount of narcotics in order to sustain life*. In such cases prescriptions to meet the absolute needs of the patient may be written and filled without involving a criminal intent to violate the law. Even in these cases every reasonable precaution should be exercised to prevent the aged and infirm addict becoming the innocent means whereby unauthorized persons may engage in the illicit use and traffic in these habit forming drugs. Prescriptions in this class of cases should bear the endorsement of a reputable physician to the effect that the patient is aged and infirm, giving age, and certifying that the drug is necessary to sustain life.

3. THE ORDINARY ADDICT.

One of the principal difficulties in administering this law will arise in the case of the ordinary addict who is neither aged or infirm nor suffering from an incurable disease. *Mere addiction alone is not recognized as an incurable disease.* It is well established

that the ordinary case of addiction yields to proper treatment, and that addicts can be taken off the drug and when otherwise physically restored and strengthened in will power will remain permanently cured. The average addict does not believe this and it is symptomatic with him to have a fear and distrust of any treatment or cure. Wherever the occasion presents itself, the hope of successful treatment should be instilled in the minds of the unfortunates addicted to this terrible habit.

The law as construed by the Supreme Court holds it to be a crime for any person, including practitioners, to furnish an addict with narcotics for the mere purpose of satisfying his cravings for the drug. The enforcement of this law as thus construed presents a problem attended with serious difficulties.

The ordinary addict when suddenly deprived of the drug to which he is addicted suffers in an extreme manner both physically and mentally. In this condition he may become a menace to life and property and practically a public charge. Therefore, it must be recognized that at present the care and treatment of such unfortunate addicts is primarily a problem to be locally handled by the municipal and state authorities. It is generally recognized that the indigent sick of a community are public charges therein, and that such immediate care and treatment as is required should be furnished by the local authorities.

A project is under consideration looking toward the assistance of the United States Public Health Service in the institutional care of these addicts, but no specific appropriation for this purpose has as yet been provided by Congress.

Collectors and internal revenue agents should confer with each other and with the United States attorneys in their respective districts and divisions regarding the handling of local emergencies as they arise, and should arrange conferences with local authorities including boards of health, for the purpose of establishing at the earliest practicable date public clinics where relief may be afforded in conformity with the law. Clinics of this character have already been established in certain cities, notably New York, New Orleans and Memphis.

The field officers of this Bureau are expected to investigate and report every illicit trafficker in narcotic drugs, including any peddler, smuggler, manufacturer, wholesaler, retailer, and practitioner, or other person, who wilfully violates the intent and provisions of this law as construed by the courts. In no other way can this menace to the manhood of our country be eliminated. The commercial or so-called "morphine doctor," must be kept under proper surveillance, and in every case where clear evidence of his wilful intent to violate this law is procured no compromise will be made, but his vigorous prosecution will be insisted upon.

This matter is brought to your attention because of its extremely important and far reaching consequences. So vital a problem must not be overlooked or treated indifferently. Any helpful views you may

desire to submit will be welcomed and given careful consideration in connection with our administrative plans and future legislation.

DANIEL C. ROPER, Commissioner.

DRUG ADDICTION MADE REPORTABLE.

At a meeting of the Board of Health of the Department of Health of the City of New York, held in the said city on the 22d day of July, 1919, the following resolution was adopted:

"Resolved, that Section 1 of the Sanitary Code be and the same is hereby amended by adding thereto, a new subdivision, to be known as Subdivision 47, to read as follows:

"Pestilential Disease: Shall be deemed to include the conditions and symptoms resulting from the habitual use of habit-forming drugs, and known as drug addiction.

NOTE: After analyzing the above in the light of our present knowledge of drug addiction, we are inclined to believe that the fool killer in New York is away on a vacation. Inasmuch as many of our most learned and respected citizens, judges, doctors, preachers, business men, are the victims of drug addiction and reporting them would submit many of those well known and respected citizens to the possibility of blackmail, disgrace and humiliation, and, inasmuch as they are not a menace to society, it is our one best guess that few, if any, doctors will be so uncharitable as to comply with this rule.

COMMENDS ADDICTS FOR THEIR "STRIKE"

DR. JOHN P. DAVIN DECLARES HYOSCIN IS HIGHLY DANGEROUS TYPE OF TREATMENT

CRITICISES CITY METHOD

SAYS UTMOST CARE IS NOT TAKEN IN HANDLING DRUG VICTIMS AT RIVERSIDE HOSPITAL

DR. BEVERLEY ROBINSON CORROBORATES DR. DAVIN'S CRITICISM

The eight drug addicts who went on strike Friday against the hyoscin treatment that was being given to them at Riverside Hospital, the city's institution on North Brother Island, furnished one of the few rational and justifiable strikes in the history of the city, in the opinion of Dr. John P. Davin of 117 West Seventy-sixth street, who has long been interested in the treatment of drug addiction and kindred subjects.

Hyoscin is a dangerous treatment, Dr. Davin said, and must be administered under the constant attendance of a physician, and should not be given by nurses. Dr. Davin pointed out that the addicts who go voluntarily to the city for treatment are generally those who have been the rounds of the different treat-

ments and when they rebel against the use of a particular treatment they usually have good grounds for their position. Of the several different treatments, including the hyoscin, Normyl, Towns-Lambert, complete withdrawal and gradual reduction, none is considered specific, Dr. Davin said, but the safest and most satisfactory plan has been to use the one most suited to the needs of the patient. Hyoscin is not an antidote for morphin as has been erroneously supposed for many years, he added, but it acts very much like chloroform or ether—it merely tides the addicts over, and is very severe on the heart.

Dr. Davin said that he had no doubt but that the eight men who opposed the use of hyoscin had good reasons for not wanting that particular treatment, and he thought they displayed a high degree of intelligence in going on "strike." The addicts asserted that the treatment was harmful to them.

"It is shown that the utmost care is not taken in the treatment of drug addicts at Riverside Hospital," continued Dr. Davin, "in the manner in which the eight 'strikers' were handled. They were brought to the city, to the Morrisania Court, and arraigned on a charge of disorderly conduct in that they did not obey the rules and regulations of the hospital, and the physician who brought them in did not bring with him any morphin with which to quiet them when they became restless. A call was sent to Lincoln Hospital, and a physician came and gave one injection, but a second call was refused, and the Fordham Hospital was then called upon and a supply obtained. The physician should have come to the city prepared to administer to the needs of the addicts. If the treatment is being given in the same careless and indifferent manner that was shown in bringing these patients in without sufficient supply of morphin to satisfy their needs while they were being tried on the disorderly conduct charge, then the hyoscin is extremely dangerous."

COMMENT OF DR. BEVERLEY ROBINSON

To the Editor of the New York Times:

I was glad to read the letter of Dr. J. P. Davin in *The Times* in regard to the treatment of opium addicts with hyoscin. Dr. Davin very properly directs attention to the great risk to life in the use of this remedy unless it is closely watched and by a physician of experience and good judgment.

The action of hyoscin varies greatly with different patients. With some, in small or moderate doses, it seems to promote sleep and quiet. With others, just the opposite symptoms are caused, and in addition an alarming and imminent condition is frequently occasioned. This has been shown by Dr. Douglas, who states that even "in the same patient it may produce loss of muscular co-ordination and of memory, accompanied by extreme restlessness, which requires the constant attention of a nurse. Unless restrained, the patient will insist on getting out of bed and falling about the room, with the possibility of seriously injuring himself." (In *Progressive Medicine*, edited by Dr. H. A. Hare, December, 1918, page 349.)

In view of this statement of Dr. Douglas, which, I believe, to be correct, the Health Department should see to it that hyoscin is only given to addicts, with closest supervision and care, by those in charge, who should be qualified physicians.

BEVERLEY ROBINSON, M. D.

Westport, N. Y., Sept. 2, 1919.

AS OTHERS VIEW THE COMPULSORY HEALTH INSURANCE PROBLEM.

The Delaware State Medical Journal, August, 1919, says editorially:

The question of state insurance is being agitated more and more, and from present appearances it seems likely that it is only a question of time till the medical profession will have foisted upon it another burden from which it may take decades to recover. Just why the doctors have to bear the full brunt of almost every piece of class legislation that the political adventurers in power see fit to put across is easy to explain: We have organization, but not united effort; we have brains, but not executive genius; we have money, but not a lobby; we have votes, but not a say; we have everything that any great class in the community should have to secure simple justice and protection, yet of all classes, the medical class pays the most to the state and gets the least in return. Why? Simply because we have never resented the first, or the second, or the third, or the nth infringement of our rights. Councilmen, legislaturemen, congressmen, all have, therefore, come to the conclusion that the *doctors will stand for anything*. Politically, they have come to regard us not as men with backbones, but as spineless jellyfish. It is high time to show them that they are 100 per cent. wrong. We *have* power, lots of power, more power than we think! Let every man in every legislative body know and know unforgettably that when he runs counter to a doctor he is antagonizing a man who has a vote, and can influence from ten to fifty other votes *every day*, and can and will yield that influence under the most subtle and effective of circumstances—in the sick room.

Furthermore, let our legislators see that for once we are not doped by our own medicine. We calmly slept when the Workmen's Compensation Act was put across: a piece of villainy that has taken thousands of dollars from the profession only to enrich the already prosperous concerns and their co-adjustors, the insurance companies.

We slept still deeper when the narcotic tax was increased 300 per cent.; we slept on and on when it was made impossible for us to get alcohol unless it was "doctored"; we were snoring when our new and radical state venereal disease law was strung around our necks; and we were positively unconscious when our iniquitous state income tax law was put over so that exemption was granted the only really independent people in the state—the farmers and the real estate profiteers. Oh! Shame on us! to think that men with brains enough to pass a college examination and to get by a state board should thus stand assininely by while such stuff as this was being handed out. But let us learn the lesson! We have got to stop having merely a "legislative committee"—we must have also a paid representative in our legislative halls; some lawyer with honesty and brains to play watch-dog for us. Call him a lobbyist if you wish—all right, he will be lobbying for a worthy cause.

Further, let us *all* pledge ourselves to abide unerringly by the decision of our local or state medical society on all questions of legislation affecting us. We have not, frankly, done so in the past, but the future must be different. If need be, let us organize on the lines of the Guilds of the Middle Ages. The New Castle County Medical Society has gone on record as being opposed to state health insurance. The question is not a burning one just now, but it may be a raging conflagration soon. The Donovan Bill did not pass in New York this term, but the governor says it, or a similar one, will be passed at the next session of the legislature, and when New York has such a law, it will be only a question of time till nearly all the states follow suit, a habit they have, very often to their detriment.

Elsewhere in this journal we publish a scathing denunciation of the New York bill by one of its leading opponents. Please read it carefully; we do not think it a bit too vehement, but even if you cannot agree with all his premises, you must admit it is a remarkably fine bit of English literature. At any rate, what we most earnestly petition you to do is to think opposition, talk opposition, and act opposition to any and all such schemes as the recent New York bill.

A word to the wise is sufficient!

Committee on Social or Health Insurance of the Illinois State Medical Society:

ED. H. OCHSNER,
GEORGE APFELBACH,
C. A. HERCULES,
W. F. BURRELL,
HENRY F. BRUNING,
Chairman.

JOSEPH FAIRHALL,
S. V. BALDERSTON,
CLEAVES BENNETT,
E. W. FIEGENBAUM,
W. D. CHAPMAN,
Secretary.

IS IT NOT TRUE, DOCTOR?

It is said there are but three classes of medical men who care to see the practice of medicine socialized. Those who have some social theories for experiment—those who are far beyond the necessity of making money—those who as yet have failed to develop a living practice.

The rank and file of doctors are opposed to it as belittling to initiative, dwarfing individuality, being reduced to a nominal salary and working in harness. Yet the question arises, are we not inadvertently urging the question to a focus, as it is said the over-enthusiastic barkeep has in his line brought prohibition upon his head by pushing business to the point of public criticism? The practice of medicine is becoming ponderous to the fellow who pays the bill, to such a degree as to cause him to invite governmental supervision. There is a growing tendency in the profession to patronize hospitals more each year, beyond the point of necessity in many cases to the patient, since it advertises one, it makes the day's work easier by seeing more cases in one place, it relieves one of unnecessary calls, since the nurse may supply the immediate relief demanded, it gives one more leisure to thus mass patients at a given point. Again the use of nurses indiscriminately relieves one of extra visits, of night calls, of frequent telephoning, of a lot of bother since the nurse is for the time a quasi doctor. I knew of men who burden a family with a trained nurse in almost every case. It makes practice easier. But, on the other hand, the expense to the patient is increasing alarmingly. The public is paying for the ease, the shifting of the burden, and just complaint is being voiced. Last week a friend told me his wife had been sick four months, suffering with a large burn on her back, and her bill—doctor's, nurse, hospital—was twelve hundred dollars. Another friend, a patient, declared he had been married five years, during which time there had been three confinements and two surgical operations, not associated with obstetrics, and his doctor bill, nurse, hospital and physician during his married life thus far was four thousand dollars. No criticism is offered in these citations, but the thought presses itself that such a drift might create

such a pyramid of criticism on the part of the public as to demand governmental relief, whereas if more prudence is exercised, and less money hunger be exhibited, more consideration for the patient be exercised, the much feared socialization of medicine may be averted or at least postponed, for it must be admitted that under present conditions of hospital beds running from twenty-five to forty dollars a week, nurses four dollars a day and ten per week for their keep, the average fellow cannot afford to patronize them, nor, on the other hand, can the average family tolerate a nurse at thirty dollars a week added to all the other expense of illness, without the cord snapping somewhere. Without outlining any method of antidotal procedure, just bear in mind the tendency of the times, socialism.—J. M. B. in *Medical Herald*.

THE DANGERS OF LUMBAR PUNCTURE

The frequency with which the cerebrospinal liquid is withdrawn for examination has increased greatly within the last few years. This is due in part to the well-established belief that the procedure of lumbar puncture is practically without danger to the patient and that the material obtained may yield information of great value. Certain contraindications have been recognized, but they are few. But recently certain studies carried on in the investigation of meningitis have shown that there may be a very serious danger indeed connected with this apparently simple operation. Wegeforth and his associates found that the release of cerebrospinal fluid during certain artificial septicemias in animals is followed by a localization of the infection within the meninges. The application of this observation is immediately obvious and study of the human patient was begun.

Wegeforth and Latham have recently presented the results of this study and their conclusions as to how the undesired consequences may be avoided (*Amer. Jour. Med. Sci.*, 1919, clviii, 183). They have been able to observe several cases in which the blood showed the presence of a meningococcus or a pneumococcus and a lumbar puncture released fluid that was normal or at the most showed a slight increase in the cell content. But following the puncture the patient developed a typical acute meningitis. It is true that this result was not an invariable one, but in those instances in which the meninges escaped infection there was generally evidence that the infecting agent was of diminished virulence. Also, meningitis did not occur if the puncture was made after the patient had received antimeningococcus serum intravenously. The clear warning for the clinician in these observations is to avoid lumbar puncture, so far as may be possible, in those patients who have a positive blood culture. It should be remembered that with a meningitis due to any other organism than the meningococcus, the demonstration of a purulent, bacteria-containing fluid is of but slight value and the patient had better, therefore, be left alone. With the meningococcus in the blood, the necessity for the introduction of serum into the subdural space is a pressing one, if there are any

symptoms of meningeal irritation and the puncture seems unavoidable. The authors urge that if a puncture must be made under these conditions, a very small needle be used and the smallest possible amount of fluid be withdrawn. In the absence of acute infection, the above restrictions, naturally, have no force. It is significant to note that within twenty-four hours, or even less, after the withdrawal of a fluid which is practically normal, the meninges may exhibit the lesions of a severe general inflammation and the fluid contain abundant pus.—*Medical Record*.

ANTHRAX AND THE STERILIZATION OF SHAVING BRUSHES.

Because of the continued occurrence of cases of anthrax due to the infected shaving brushes, the United States Public Health Service has issued the following circular letter of warning to state and local health authorities and others concerned:

To State and Local Health Authorities and others concerned:

The continued occurrence of cases of anthrax due to infected shaving brushes leads this bureau to believe that the suggestion contained in Bureau Circular Letter No. 136, dated July 31, 1918, recommending the sterilization of all brushes in trade channels, is not being complied with. Attention is therefore again called to the fact that there are still undoubtedly in trade channels shaving brushes made from material contaminated with anthrax. Any brushes found in the market which do not bear the name or the trade mark of the manufacturer should be regarded with suspicion, and should be returned to the source from which they were secured, or should be disinfected.

For the sterilization of brushes the following procedure is believed to be effective:

The brush should be soaked for four hours in a ten per cent solution of formalin (by formalin is meant a forty per cent solution of formaldehyde). The solution should be kept at a temperature of 110 degrees F. and the brush so agitated as to bring the solution into contact with all hair or bristles.

I shall be obliged to you for bringing this information to the attention of all those interested.

Respectfully,

RUPERT BLUE,
Surgeon General.

THE FETISH OF EXAMINATIONS

One of the evil deeds in life which we hope to be forgiven for, if there is a hereafter and a forgiving power, is our insistence (in earlier years) upon final or term examinations. We hope the day will come when a better way of determining one's fitness to pass from school life's

work will be devised. While perhaps the results of examinations are criteria in general for the fitness of candidates, we know equally well that there are many circumstances which often prevent a splendid man and fair scholar from obtaining a fair start in life just because he fails to make a certain percentage in examination or fails to have the exact number of credits for admission to higher work.

The following editorial from the *Cincinnati Post*, on "The Dunce and the Star," expresses our sentiments so well that we reproduce it in full:

Our old friend Noah Webster tells us that a "dunce" is an ignoramus and a blockhead. Some school teachers say a dunce is a "boy who'll never amount to anything." And some of us older fellows know how it used to feel to stand in the schoolroom corner and wear a dunce's cap. Honestly, we agreed with the teacher then that we were miserable failures.

But somehow or other we pulled through.

And it appears that other dunces have done even better. The United States Bureau of Education has just published a report on "school examinations and failures to pass." It says:

That the formal examination is no criterion for determining ability is a conclusion abundantly supported by an examination of the school careers of men who have become famous. For example, Thomas A. Edison never could pass his school examinations, and when his teacher reported that it was a waste of time for him to attend school he was taken out and never returned.

Charles W. Eliot, while president of Harvard University, once remarked that he would not have been able to pass the entrance examinations of his own university. Henry Ward Beecher stood sixty-fourth in an examination in grammar, while the boy who ranked first became a barber in a Southern city.

All this should be interesting, and somewhat consoling, to the boy or girl who "failed to pass." It doesn't mean that those who win first prize in school examinations fail in after life, but it does prove that a dunce's cap often is on the wrong head, and that failure to pass a school examination won't keep a fellow from becoming a successful business man, a learned professional man, a banker, lawyer, farmer, inventor, educator, preacher, president."

Possibly it is that "school stars" fail in later life because their school successes keyed them up to a false notch of self-confidence which discountenanced further effort; and on the other hand, it may be true that school failures are a sort of tonic or spur which drives harder and faster to make up for a late start.

Exchange.

Public Health

FOR DEFENSE AGAINST "FLU"

STATE AND FEDERAL GOVERNMENTS ORGANIZING
EPIDEMIC MEDICAL RESERVE FORCE.
NEW QUARANTINE RULES OUT.

STATE DIRECTOR EXPRESSES VIEWS ON EPIDEMIC
PROBABILITY.

In completing arrangements to meet another invasion of influenza, the State Department of Public Health has addressed a communication to each of the County Medical Societies requesting the co-operation of the medical profession in the enforcement of preventive and suppressive measures and in the organization of a medical reserve force which will be available for service in the event of epidemic emergencies.

Commenting on the possibility of another epidemic of influenza and the best means of its avoidance, the State Director of Public Health says:

"Nobody can say with any degree of certainty that we shall experience an epidemic prevalence of influenza this fall or winter. All authorities on the subject agree, however, that in all probability we shall have more than the usual number of cases of influenza and pneumonia with a mortality rate higher than normal. That we shall experience anything approximating the calamitous conditions of a year ago is believed to be most unlikely. It is the prevailing opinion that the infection will be less virulent than last fall and winter and that fewer cases will have fatal termination.

"Notwithstanding this more optimistic outlook it behooves health authorities everywhere to prepare *now* to meet any emergency that may arise. Preparedness is the plan of every efficient health organization.

"Now is the time to be giving close attention to the detection and control of possible sources of infection. Isolation of known or suspected cases of influenza is not only more feasible now while there are few cases, but it is the most important safeguard against a general outbreak. The best way to start a general conflagration is to permit your infection bearers to run at large.

"It, therefore, is clear that great responsibilities rest upon the medical profession and the health authorities at this time. The public, too, is not without responsibility in this matter, in fact, upon the conduct of the people themselves depends in largest measure whether we shall have or escape another epidemic. It is up to each and every one of us to faithfully and painstakingly observe the prescribed precautions and especially to see that the regulations designed for prevention of the spread of the infection are strictly enforced and observed.

"In the opinion of most competent observers it is a grave mistake to attach great faith to the protective qualities of influenza vaccines. The efficiency of anti-influenza vaccines remains to be established; so far as is known to the closest students of this subject there

are none of any proven value. In this connection permit me to quote from a communication received from the Surgeon General of the United States Public Health Service under date of September 19, 1919. He says: 'One point which I think should be emphasized in any material which you send out to your health officers or to the newspapers is that experiments have not shown influenza to be of any value as a prophylactic measure.'

"Our greatest dependence, therefore, must be placed on the general observance of other measures for control, the most important of which relate to the prevention of contact between the sick and the well."

NEW QUARANTINE RULES FOR BOTH INFLUENZA AND PNEUMONIA

New state regulations for the control and suppression of both influenza and pneumonia, based upon the best judgment of health experts throughout the country, have been promulgated by the State Department of Public Health and are now applicable throughout Illinois. Some of the more important features of these rules with which all physicians should be familiar are as follows:

1. Every known or suspected case of influenza or pneumonia of any form must be reported to the local authority within twelve hours of knowledge of same. In the interest of public safety acute bronchitis, "bad colds," "dust colds" with fever and lagrippe-like pains shall be regarded as suspected cases and so reported. Reports made by telephone must be followed by written reports within twelve hours.

2. Premises upon which a case or suspected case of influenza or pneumonia exists shall be quarantined and placarded in accordance with specifications set forth in the rules. The patient and attendant must be effectively isolated, otherwise all occupants of the premises shall be confined thereto. Visiting on infected premises is strictly prohibited.

3. Persons residing on quarantined premises and those suffering from "bad colds" or other suspicious illness are strictly prohibited from attending public or private gatherings of every kind, including such as theatre, church, school, lodge or social assemblages.

THE EPIDEMIC MEDICAL RESERVE

With a view to promptly extending relief to any stricken community when the demands for medical attention are greater than the local doctors can supply the State Department of Health is now organizing an epidemic medical reserve corps.

Within the last month, the State Director of Health has addressed a request to the profession through the country medical societies for volunteers for this service. Responses to this request are still being received.

Under arrangements with the United States Treasury Department, Bureau of Public Health Service, the physicians who are called for service will be paid at the rate of two hundred dollars per month, plus

four dollars per day for subsistence with an additional allowance to cover the necessary traveling expenses.

So far as is possible assignments for service will be made to points near the home of the volunteer physician.

POSITIONS OPEN IN STATE HEALTH SERVICE

In the reorganization of the State Department of Public Health made possible by increased appropriations made by the Fifty-First General Assembly, a number of important positions are now open to properly qualified persons. These positions will be filled through temporary appointment subject to later service examination. Under the Civil Service Law, applicants for these positions must be legal residents of Illinois.

The principal vacancies at the present time are, Director of Biological and Research Laboratories, salary \$3,600 a year; Chief Bacteriologist and Pathologist, salary \$2,400 a year; Assistant Epidemiologist, salary \$2,000 a year; one supervising tuberculosis nurse and two supervising school nurses.

Inquiries in regard to these positions should be addressed to the Director of the State Department of Public Health, Springfield.

ILLEGAL CERTIFICATION OF DEATHS DUE TO VIOLENCE

The Division of Vital Statistics of the State Department of Public Health is making every effort to put a stop to the certification of deaths due to violence, casualty and undue means by physicians and to have all such cases referred to the coroner as provided by law. While these certificates are often made by medical men through misapprehension or ignorance of the statutory requirements, the act is none the less illegal, and is not infrequently the cause of miscarriage of justice or of serious trouble or financial loss to the families of the deceased.

Not infrequently the Division of Vital Statistics returns a death certificate signed by a physician which should have been certified by the coroner calling attention of local authorities for the first time to a death which requires investigation and by the time the certificate has reached the Department of Health and has been returned to local authorities, the body is frequently in such condition as to make inquest or post-mortem examination practically impossible.

Apparently many physicians may be under the misapprehension that the coroner's duties cover only those cases in which the individual is found dead, not having been under previous treatment or where the cause of death is unknown. As a matter of fact, there are many cases in which the cause of death is perfectly clear to the physician, but in which his act in certifying the death is directly in violation of the state law. For example, in the case of death of an aged person occurring shortly after a fall in which a fracture of the hip is sustained, the coroner must make the

legal determination of the cause of death and the signature of the certificate by the physician is illegal, although there is no mystery or considerable degree of uncertainty attached to the case. Every case of abortion or miscarriage is presumptive evidence of undue means and if the death occurs it is the duty of the coroner to hold an inquest. If it be a case of accident, the coroner's determination of the fact serves as a protection for the reputation of those innocent of wrong doing; while if the death is due to induced abortion, the action of the coroner leads to the prosecution of the guilty. In fact, the reputations of physicians have been naturally sacrificed after the burial of the deceased person under the conditions in which the coroner's certification would have served as his means of protection.

Within recent years, both accident and life insurance companies and particularly those which are inclined to take advantage of legal technicalities, have come to carefully scrutinize proof of death and take exception to official irregularities in the certificate and in a number of instances the illegal certificate signed by the physician when the law requires the signature of the coroner, has proven a weak spot in an otherwise strong action for damages.

The State Department of Public Health within recent months has received death certificates illegally signed by physicians with the following cause of deaths, all of which cases should have been referred to the coroner: Abortion, whether accidental, carelessness or otherwise; accidents, whether resulting in immediate death or contributory to death as primary cause; anesthesia, death while under an anesthetic; burns or scalds; choking, accidental or otherwise; crushing of any kind; cutting of any kind; drowning, accidental or otherwise; electrocution or electrical shock; fire; firearms; falls; homicide; lightning; mine disaster; poisoning, whether accidental or otherwise; railroad accident; shooting, whether accidental or otherwise; suffocation of infant by overlying; sun stroke; septicemia from any wound.

The Division of Vital Statistics calls attention of physicians to the necessity of referring all the foregoing cases to the coroner and urges that deaths from the following causes should also be referred to the coroner: Alcoholism, especially acute alcoholism; asphyxiating from any cause except asphyxia neonatorum; convulsion in adults without qualification; exposure; freezing; heart prostration; hydrophobia or rabies; injuries of any kind; suffocation of infant by overlying; sudden death; tetanus, or unknown cause.

ENDORSE CO-ORDINATION OF HEALTH AGENCIES

The Mississippi Valley Conference on Tuberculosis, at its recent meeting at Des Moines, Iowa, went on record as endorsing the plan of co-ordination of governmental and extra-governmental health agencies as proposed by the Conference of State and Provincial Health Authorities at their sessions in Atlantic City in June. Steps have already been taken to co-ordi-

nate the activities of the American Red Cross and the National Tuberculosis Association within the states of the Nation with the several State health departments. In all of these State plans, the State health department will act as the point of contact or co-ordinating agency. Dr. C. St. Clair Drake, Director of Public Health of Illinois, is executive officer of the Conference of State and Provincial Health Authorities, and Dr. George Thomas Palmer, President of the Illinois Tuberculosis Association and Assistant Director of the State Department of Public Health, is the representative of the executive committee of the National Tuberculosis Association charged with the development of co-operative relationship with State health departments.

It is stated that a plan of co-ordination of governmental and extra-governmental agencies in Illinois, already practically in effect, will be formally outlined within the next few weeks. The first co-ordinating effort will be directed toward the supervision of public volunteer agencies.

ILLUSTRATED LECTURES FOR COUNTY MEDICAL SOCIETIES

The State Department of Public Health Instruction of the State Department of Public Health is now prepared to offer competent speakers for lectures before county medical societies. These speakers, if desired, are provided with steropticon or motion picture machines and with suitable slides or films. Their services may be obtained either for the regular meetings of county societies or for possible meetings held under the auspices of county medical societies.

RECENT PUBLIC HEALTH DECISIONS

The State Department of Public Health is in receipt of a decision rendered by the Supreme Court of Nebraska upholding the right of local health authorities to quarantine a person infected with a venereal disease. In this case a woman who was found to be infected was ordered detained for treatment in a detention home. The decision of the Supreme Court was rendered as the result of habeas corpus proceedings to secure the woman's release from quarantine. The Supreme Court held that the detention was important for the purpose of protecting the public and that the city has ample power to draft ordinances for this purpose.

Information has also been received to the decision in the Supreme Court of Arizona as to the right of local health authorities to close public schools contrary to the wishes of the school trustees during an epidemic of communicable disease. The court held that while the school trustees were in power to conduct the affairs of the schools that the local health officer has the power to determine when an emergency exists, and has power to close public schools in case of such emergency regardless of the wishes or action of the school authorities.

OVERCROWDING IN COLLEGE TOWNS

On account of the reported overcrowding of students quarters in boarding houses in college towns, the State Department of Public Health has assigned inspectors to investigate existing conditions.

It is stated that in many instances the rental for students quarters has been materially increased. In some instances being doubled or trebled and that as a result quarters formerly accommodating one or two students are now being used to house three or four or more.

The findings of the State Health Department, if corroborative of initial reports, will be brought to the attention of the college authorities and of the local health officials.

TUBERCULOSIS DEVELOPMENT IN ILLINOIS

Thirty-two county boards of supervisors and commissioners in Illinois at their annual meetings in September voted taxes and made appropriations totaling \$1,065,000 for tuberculosis work under the provisions of the Illinois County Tuberculosis Sanatorium law. Of the group of 40 Illinois counties which have voted favorably on the proposition of such tax levies, the county boards in Boone, Clark, Coles and Madison adjourned without making any financial provisions for their sanatorium boards. No reports have been received from Morgan, Randolph, Winnebago and Scott counties. The counties which have reported, with the amount of money set aside for tuberculosis work in each county is as follows:

Kane County	\$100,000
McLean County	80,000
Douglas County	72,000
DeKalb County	65,000
Lee County	60,000
Logan County	60,000
Christian County	60,000
LaSalle County	60,000
Livingston County	60,000
Piatt County	50,000
Ogle County	45,000
Macon County	40,000
Adams County	40,000
McDonough County	39,000
Woodford County	35,000
Tazewell County	30,000
Stephenson County	25,000
Henry County	24,500
Jefferson County	20,000
Will County	15,000
Clay County	15,000
Whiteside County	12,000
Fulton County	10,000
Grundy County	10,000
DeWitt County	9,000
Pike County	6,900
Vermilion County	5,000
Bureau County	5,000
Champaign County	5,000

Jackson County	4,000
Crawford County	3,000
Marion County	500
Total	\$1,065,000

Of the above named counties, tuberculosis sanatoria are either in operation or under construction in La Salle, McLean, Adams, and Tazewell counties. Plans of local sanatorium boards provide for building tuberculosis hospitals next spring in Kane, Douglas, Lee, Logan, Christian, Livingston, Piatt, Ogle, Macon, Stephenson, Henry, Jefferson, DeKalb, McDonough and Woodford counties. Although no appropriation has been reported yet this year in Morgan County, the tuberculosis sanatorium there is under construction and there is no doubt that funds for its completion and successful operation will be provided. The rapid growth in the Illinois tuberculosis campaign, and the increase in the number of sanatorium beds for the tuberculosis, together with the increased funds made available for community nursing service, tuberculosis clinics, etc., has been largely attributed to the activities of the Illinois Tuberculosis Association and its several affiliated local societies.

Investors' Department

QUERIES AND ANSWERS.

The relation which a man's investments bear to his vocation is necessarily an intimate one since one of the primary objects of labor, whether mental or physical, is to accumulate a competency for the afternoon of life. Honest toil has its own reward, but the responsibility resting upon the individual suggests the wisdom of making provision for the time when through advanced age or misfortune he becomes unproductive.

It is superfluous to refer to the causes which have affected the basic values of securities, favorably and otherwise, with the result that investors are obliged to adjust themselves to conditions of today and what the future portends.

Legislation, both State and Federal, labor and material costs, and the trend of economic conditions all have a bearing upon securities. To ignore this fact and to hold to old theories would be but to invite disaster. Conditions have changed and it behooves the investor who would keep abreast of the times to study present day industrial problems and their probable effect upon values and market prices.

The popularity of a department devoted to securities has been suggested to the editor. It is assumed that every reader of the JOURNAL is a holder, to a greater or less degree, of invest-

ments in one form or another as the result of his service in the profession. The object of such a department will be to answer all inquiries, offer recommendations or otherwise serve those who wish to discuss their investment problems. The columns of the *JOURNAL* will be open to all members who may wish information or advice as above outlined, the only condition or restriction being that the reply to any inquiry shall be limited to 100 words. All inquiries should be addressed to the Editor. Replies will be made through the Investors' Department of the *JOURNAL*. Inquiries made through this Department will be handled by our special representative, who has made a life study of securities. While no responsibility is assumed either by the publishers or the department, subscribers will understand that all information is given in good faith, without charge, and in the hope that benefit will result therefrom.

This Department is primarily for the purpose of giving information as to securities which may be now owned by subscribers, as well as information or suggestions regarding current offerings that will enable them to form their own conclusions. To illustrate, inquiries taken at random from many at hand, we quote:

Question—How is the Quaker Oats Company 6 per cent Preferred Stock regarded, and in your opinion is it a dependable dividend payer?—F. W. C.

Answer—The chief elements of strength and security behind this investment are the stability of the business, the established market in many countries of the company's products at popular prices, the steady consistent record of earnings covering many years, coupled with a management and directorate which stands high in the business world. The company has no mortgage debt. We have every reason to feel that the company may be relied upon to declare regularly its dividend obligations.

Question—I hold Commonwealth Edison First Mortgage 5s, purchased at a price which is considerably lower than current market price. Would you advise selling at today's market?—C. B. W.

Answer—These bonds are now selling in the neighborhood of 90, and as all public utility properties have experienced a strenuous period, owing to high operating costs because of both

labor and material prices, the market on these bonds has naturally suffered to a considerable extent. However, we think the worst has passed, and from now on there should be a gradual increase in earnings and naturally an advance in price. Rather than dispose of the bonds at this time, a further purchase might be advisable to equalize your cost.

Question—What class of investment do you recommend for a widowed sister who was left an estate valued at about \$15,000?—R. W. J.

Answer—U. S. Government bonds are, of course, regarded as the safest investment. However, there are attractive municipal issues, which, purchased at prevailing prices, would prove equally satisfactory, being tax exempt and yielding a higher return.

It is to be hoped that subscribers to the *JOURNAL* will avail themselves of this service, thereby securing unbiased advice in their financial dealings.

ABSENCE OF CANCER IN THE ARCTIC REGIONS

* It is reported by Dr. H. C. Ross in the *Lancet* on the authority of Vilhjalmur Stefansson, the Arctic explorer, who has returned recently from an expedition to the Far North that cancer does not exist among the Esquimaux. Moreover, Ross has been told also by Sir William MacGregor, Dr. W. T. Grenfell, Mr. Frank Benzley, and Rear Admiral Peary that they had never seen a case of cancer among the native tribes of the Far North. If it may be assumed that cancer is absent from the Arctic regions, and the assumption seems justifiable, the fact, Ross says, gives rise to some interesting reflections. In the first instance, the Esquimaux are perhaps the most carnivorous race of human beings in the world, and consume few vegetables; therefore, the non-existence of cancer among them would appear to weaken one of the dietetic theories of the cause of this disease. There seems to be no racial or physiological difference which would exempt the Esquimaux from cancer, and, in addition, the observations of Panum, fifty years or so ago, that cancer was either extremely rare or did not exist in Iceland or Greenland, in the settlements peopled by Europeans, would imply that race does not enter into the question. Consequently, as Ross points out, the climatic explanation is the most plausible, and this tends to revive the parasitic theory of origin. The cold in the Arctic regions is too intense for saprophytic organism to live, and diseases conveyed by aerial convection, such as "colds," are unknown. Ross is of the opinion that cancer may come in a similar category, and that its cause is an organism which invades the body from without which is air-borne in part of its life history, and which heretofore cannot

exist in the Arctic climate. If it should prove to be a definite fact that the Far North is free from cancer, then the search for a satisfactory explanation of this fact will be interesting.—*Medical Record*.

TUBERCULOSIS BARRED THOUSANDS FROM ARMY

Sixty-two thousand men afflicted with tuberculosis were barred from admission into the National Army and 20,000 others who reached camps were discharged for the same reason. At army tuberculosis hospitals, the National Tuberculosis Association announced last month 6,000 men still in the service are being treated. Soldiers or sailors honorably discharged since October 6, 1917, and suffering from tuberculosis will be given free hospital care upon application to the United States Public Health Service or the Bureau of War Risk Insurance, according to the association.

The organization announced that plans for a national campaign of tuberculosis prevention would be made at a conference of federal, state and municipal health authorities at Atlantic City next month.—J. M. S. of N. J.

Society Proceedings

COOK COUNTY

Chicago Laryngological and Otological Society

Meeting of Dec. 17, 1918 Continued

EXAMINATION OF AVIATORS

DISCUSSION

Dr. Alfred Lewy said that he and Dr. Hayden were associated in the work for many months and would check up on each other in doubtful cases. Sometimes their findings did not agree; sometimes on retesting their own cases they obtained a different result the second time. This brought them to the conclusion that there was something in the interpretation of the test, even after the rigid rules of technic that were followed. Dr. Lewy was of the opinion that any test that was severe enough to bring about pallor, tremor, sweating, muscular relaxation and vomiting was also severe enough to derange the end-organ under examination and its connections, probably through vaso-motor disturbance, and thus in some cases defeat itself. On the other hand, some men would not respond to the test; particularly would they fail to past-point, although normal in every way. He believed they had superior control, but Dr. Isaac Jones believed it was due to an insensitive labyrinth. He was glad to hear Dr. Hayden state that Dr. Fisher had said that men could become immune to the past-pointing, as it supported the theory of superior control. Col. Lewis had also said that some men could maintain control in spite of vertigo and be able to touch the testing finger. They had examined two or three aviators who had been in service but who had to be retested because their papers were lost, or the physical examination was incomplete, and occasionally a man who had had considerable experience with flying of various kinds and come out successfully would fail to do the past-pointing. He was of the opinion that they were also cases of superior control.

In regard to Dr. Pierce's observation that the nystagmus stopped with the onset of vomiting, that also stopped the past-pointing in a few instances.

The blindfold was necessary not only to keep the patient from opening his eyes and seeing where the finger was, but also to keep him from orienting himself by a window or a light of some sort. He could see a light through his closed lids. It was also necessary to keep the room very quiet, for they might be able to orient themselves by the direction of

the sound of a voice observed before being put on the chair. There was still a great diversity of opinion as to just how much value the test had, but Jones and Fisher had been able to locate lesions where neurologists had failed. Other neurologists and stated that no information had been obtained through the Barany test that had not been obtained by other well established tests.

The question asked of Dr. Dean regarding test of the superior canal of the opposite side was because of the claim of Jones and Fisher that that was one of the points of differentiation of the cerebello-pontine angle tumor, but Dr. Wilson did not seem convinced of this.

Dr. J. Gordon Wilson considered pointing primarily a cerebral action. It was not a subconscious act, but a conscious attempt to reach an object, and like most cerebral acts was capable of education. To show the close connection between pointing and vertigo, three or four years ago Dr. Wilson demonstrated a case in which a man had been shot through the cerebellum. He had no past-pointing. In this case nystagmus could be produced easily; vertigo could be produced only with great difficulty and only when it was present could past-pointing be demonstrated.

Dr. Wilson did not consider the paper inopportune, because aviators were still wanted and there was still difficulty about the tests for them. The question of tests was a very large one and otologists had been asked how much reliance could be placed on labyrinthine tests. In his opinion this depended upon a clear recognition of the fundamental physiological function of the labyrinth. It should be remembered that the ordinary afferent impulses from the labyrinth were not conscious but subconscious; the canal tells not of rotation, but acceleration of rotation. The static labyrinth was concerned with keeping the head right side up. Only when these activities were exaggerated or when attention was fixed on the head movements did they become conscious. He thought it well to recognize the limitations of the labyrinth as a guide.

He admired the amount of work that Dr. Hayden and his colleague had done and considered the paper particularly valuable because it gave the checked up observations of two men working together.

Dr. Harry Kahn asked if different results were obtained in the same individual in the same day.

Dr. Hayden, closing, replied that they had tried not to make the same test on the same man more than once on any day.

All cases which showed doubtful, indefinite or abnormal rotation reactions were tested calorically—cold water at 68° F. being routinely used. The right ear was douched one day and the left ear the following. This precaution was followed to prevent the candidates becoming unduly nauseated. Nystagmus and past-pointing were taken with the head thirty degrees forward, and then sixty degrees backward. Past-pointing was also taken with the candidate's head on his knees, with the forearm only. Here the observation of nystagmus was almost impossible. For convenience these positions were designated as the first (head thirty degrees forward); second (head sixty degrees backward), and third (head on knees).

In reply to Dr. Wilson, the candidate at the beginning sensed properly the direction in which he was being turned. He felt that he was standing perfectly still as soon as rapidity of endolymph movement caught up with the speed of the chair, and that he was going in the opposite direction as soon as the chair was stopped. For that reason he reached around to the right, past the observer's finger (i. e., past-pointed) to make allowance for his fancied excursion to the left. This sensation continued until the endolymph movement ceased. Thus systematic past-pointing depended entirely on vertigo.

While falling and past-pointing are primarily objective symptoms of vertigo, they may at the same time possess a subjective element. For that very reason the past-pointing and falling reactions might be suppressed to a greater or less degree by the candidate, especially if his labyrinth was not overly sensitive and if he had been turned on previous occasions. Lewis Fisher had observed in his work at Mineola how experienced flyers had learned to assume certain positions in their machines which enabled them to do even the spiral, and nose dives without becoming dangerously dizzy. The vestibular

tests might be of considerable value in the future for the scientific selection of pilots for commercial purposes. Aerial navigation was just in its infancy; its possibilities, advanced as they have been at least a hundred years by the recent war, were almost boundless.

JOINT MEETING OF THE CHICAGO OPHTHALMOLOGICAL AND CHICAGO MEDICAL SOCIETIES,

December 18, 1918

FOURTEEN POINTS CONCERNING OPHTHAL- MIA NEONATORUM

Dr. Frank Allport had endeavored to formulate fourteen points which he considered especially important in connection with this subject.

First. Ophthalmia neonatorum is responsible for about 20 per cent of the blind in the United States and for about 25 per cent of inmates of blind asylums.

Second. It costs about \$30 a year to educate an ordinary child, and about \$400 a year to educate and care for a blind child.

Third. There are about fifty blind schools in the United States, costing about \$2,000,000 a year to maintain.

Fourth. Ophthalmia neonatorum costs the United States about \$7,000,000 per annum in actual money.

Fifth. Next to optic nerve atrophy, ophthalmia neonatorum is the most prolific cause of blindness in the United States.

Sixth. The Credé treatment for all new-born children would almost entirely eliminate this disease and its dreadful consequences from the world.

Seventh. The use of this evidently necessary treatment is by no means universal, and its omission is not confined to midwives. In order to accomplish its purpose the use of this treatment should be invariable. It should be understood that gonorrhea is not the only condition that will produce this disease, but that it may occur from other and non-disgraceful causes.

Eighth. Midwives are a financial and sociological necessity. Fully one-half of the confinements are attended by midwives. If it were not for these midwives most of these cases would be merely looked after by friends and relatives. Midwives should be educated, examined, licensed and inspected, and should always call in medical assistance in complicated cases.

Ninth. Births should be compulsorily reported within a few hours. The ocular condition should be reported, and the physician should state whether or not he has used the prophylactic treatment.

Tenth. Suitable laws should be passed in each state providing for the invariable use of Credé prophylaxis in all newly born children, and proper penalties should be imposed for the non-observance of such instruction. Every legitimate method of educating and enlightening the people, the midwives and the doctors should be encouraged.

Eleventh. While not prophesying as to what the future may produce in the way of prophylaxis, it is reasonably certain that at present there is no remedy that can take the place of nitrate of silver. It alone

has stood the test of time. In order to provide free and reliable silver solutions some states and cities prepare and distribute fresh and carefully compounded solutions to doctors and midwives on application.

Twelfth. One almost insurmountable difficulty in the way of proper treatment of ophthalmia neonatorum is the paucity of resources in combating the disease. A small hospital should be established in all large cities for the prompt reception of such cases. Or it should be clearly understood by health officers, doctors, midwives, visiting nurses, etc., that certain hospitals will receive such patients, in special wards at any time, day or night, and undertake to provide expert medical attendance and proper care.

Thirteenth. Health departments in the larger cities should employ an experienced eye nurse to search out and follow up cases of ophthalmia neonatorum, and to see that immediate action is taken when cases are found.

Fourteenth. I believe that great benefit can be accomplished by the free and frequent distribution of brief and pointed pamphlets, printed in several languages, by some central organization such as the National Committee for the Prevention of Blindness.

The paper contained a sample of what Dr. Allport believed should be covered in such a leaflet.

DISCUSSION

Dr. Richard J. Tivnen emphasized some of the points brought out by Dr. Allport and thought the outstanding feature of this disease was that it could be prevented. This meant that 25 per cent of the blindness among children could be eliminated, and it was a reflection that even one of these cases, in the light of modern treatment, should have been blind. At one time our Committee on the Prevention of Blindness thought that the best way to prevent ophthalmia neonatorum was through legislation, but it was soon found that this was a very discouraging and unsatisfactory way of meeting the problem. We then turned to what we afterwards found to be the best plan—education. This “education” should come from within the profession as well as from without. The one thing that had proved most effective in preventing this disease was the so-called Credé method of prophylaxis, which was very simple and could be carried out with some simple instruction by anybody. It simply meant the instillation in the infant's eye, following birth, of a drop of 2 per cent solution of nitrate of silver. Many of the obstetrical textbooks, however, were lax in their instructions about carrying out this procedure. They failed to say that the only time the solution should be dropped in the eye of the infant was immediately after birth and if required further it was applied to the lids. He knew of one case where it had been dropped in the eyes four or five times a day for a considerable period with disastrous results. The Credé preventative was the accepted treatment for the prevention of infection, and if the profession would adopt it universally it would be a long step forward in the elimination of blindness due to ophthalmia neonatorum. Education might also with advantage take the form of a more intimate cooperation between the specialists in diseases of the eye and the general practitioner in the handling of these cases, and in the early recognition of the disease. It was idle to talk of preventing blindness if the cases were not recognized and treated early. The ulcer of the cornea which was so destructive seldom appeared for several days and was usually preceded by redness, edema and discharge. It could be said that a reddened, discharging eye with a swollen eyelid in the baby at birth was more than suspicious and should always be investigated and treated. Every eye-man on the staff of every general hospital should insist that he be granted the opportunity to deliver a course of lectures on this subject to the nurses,

and public lectures with stereopticon slides which would particularly appeal to the people would have a wonderful effect in bringing about the recognition and dangers of this disease.

Dr. N. C. Nelson reported on the treatment used in the class of cases at the Illinois Charitable Eye and Ear Infirmary. He stated that they saw many cases that had been treated with the Cr  d   method, and yet developed ophthalmia neonatorum. This was due to one of two things, either the improper application of the silver nitrate solution, or the eyes were infected postpartum by the person delegated to care for the mother and babe. In more than 70 per cent of their cases the infection began from two to ten days after birth, and about 50 per cent occurring on the third or fourth day and the other 20 per cent from two weeks to two months after birth. Owing to their cases coming to the hospital so long after infection began the percentage in which both eyes were involved was very high, 84 per cent, as compared with only 6 per cent R. E. and 10 per cent L. E. This proved how important it was to have the treatment early; nearly all cases with only one eye involved came for treatment within the first week and of those only 2 per cent developed infection in the other eye.

In the very acute cases ice was used to the eyes from two to three hours, repeated every four hours for the first twenty-four to thirty-six hours. He did not consider it good policy to keep the ice on constantly as it lowered the vitality of the cornea and thus defeated its purpose. The mother was instructed how to bathe the eyelids with pledgets of cotton soaked in warm boric acid solution every fifteen minutes. The eye was irrigated with great care every two hours in the beginning and later every four hours, every possible precaution being taken to prevent injury of the cornea. A one-half per cent solution of atropin was used three times daily to cure the iritis or prevent its development. Some form of silver was usually dropped in the eye three or four times daily without evertng the lids. In conjunction with the irrigation and atropin a preparation of "natriol" and recommended by Dr. Barr had been used in a number of cases. It seems particularly suited to cases in which there was considerable thick, creamy pus. As soon as three negative swears were obtained the patient was dismissed and given a mild solution of zinc and boric acid to be used at home several times daily, returning twice a week for four weeks. In treating ulcers of the cornea they generally used alcohol or tincture of iodine and seldom the thermic cautery.

He thought it made little difference what was used. The important factors were to get the cases early, keep them clean, and handle the lids carefully during treatment. If this was done the majority of cases would recover without complications.

Dr. A. A. Hayden endorsed everything Dr. Allport had said. Dr. Agnew, of New York, a long time ago devised a fairly permanent solution of silver nitrate, continuing to the ounce one dram of sweet spirits of nitre, which kept the solution stable for a number of months. He believed it was not necessary to evert the lids if a lid elevator was used through which the irrigation could be made. This elevator contained a canal with two or three openings in the margin of the end which was placed under the upper lid and allowed free irrigation. The accumulation of pus could be decreased by frequently anointing the lids with a 1:5000 bichlorid solution. Specific instruction should be given in works on obstetrics not to irrigate the eye with salt solution before using the silver nitrate, as was often done. In his opinion ice should not be applied for more than ten or fifteen minutes at a time, applications being made as often as every two or three hours. The thing that gave most relief after the lids became enormously swollen was an early canthotomy. Nurses and doctors should use every possible preventive measure to avoid personal contamination. Large glasses should be worn in the treatment of these cases, as was done in various operations for pus tubes of other operations in which the gonococcus might be present, and the hands should be most carefully washed before and after the treatment.

Dr. G. Henry Mundt was convinced that education was a very important factor in the prevention of gonorrheal ophthalmia. Where education failed the fear of God placed in a man's heart might be of some value. He cited a case against a hospital in this city in which argyrol was used in place of silver

nitrate in which the hospital and physicians were assessed in the neighborhood of \$14,000. Men who formerly believed that a substitute for the Cr  d   method could be used were now convinced that this should not be attempted. In a great many hospitals if physicians wanted anything else used it was necessary to give a written order to that effect, and most men would think twice before doing this. He agreed with Dr. Hayden that an external canthotomy was one of the most helpful things in preventing, also in the treatment of corneal ulcer.

Dr. John M. Lipson stated that in fifteen years' experience only one child had developed ophthalmia neonatorum. All of his cases were treated exactly alike by means of the Cr  d   method and he did not understand why this child developed the disease, unless it was the only one in which the gonococcus was present. It was his opinion that the cases that did not develop the ophthalmia neonatorum did not have the gonococcus.

Dr. Thomas O. Edgar, Dixon, Illinois, reported an unusual case seen by him during the past year and a half. A two months old baby was brought for examination with a history of having had what was presumed to be 2 per cent silver nitrate dropped into its eyes six or eight hours after birth by a practical nurse. The baby, previously quiet, cried severely during the night. About 4 a. m., eight hours after the use of the silver nitrate, the right eyelids began to bleed and continued to do so all that day, becoming much worse in the second evening, and in spite of the employment, by a second doctor who had been summoned, of various means to stop the hemorrhage, including the use of cotton packed under the lid and the injection of some kind of serum into its leg, the bleeding ceased only after a grave loss of blood during the next twenty-four hours. Three days later the right eye bled again for several hours. During this time the eyelids of the right eye were much swollen. When first seen by Edgar at the age of two months the upper eyelid of the right eye was slightly congested and showed a tendency to invert, while the cornea exhibited a central whitish opacification, superficial but also extending into the deeper layers. This area in its densest portion was approximately round in shape, about five millimeters in diameter and showed several pin point brownish areas, probably due to argyrol. The left cornea was clear. A bacteriological smear from the conjunctival sac in each eye proved negative. The eyelashes for a definite portion of the border of the right upper lid extending eight millimeters temporallyward from the center of the lid border continued during the next year at times, especially when the baby cried, to rub the cornea and even caused a faint pannus in the upper peripheral portion. The question of hemophiliac diathesis having arisen in this case, the test of the coagulation time and hemoglobin was more than once taken during its first year and together with a general physical examination by a competent internist proved normal. There was no history of hemophilia in the family. When the child was fourteen months old the parents consented to a modified Hotz operation for the circumscribed entropion, with an excellent cosmetic and therapeutic result. When seen four months later the cornea had become much clearer. According to the history as given it is not certain that there was any bleeding from the left eye; if present, it must have been insignificant; in explanation of which it is possible that none or little of the medicine was gotten into the second eye.

It was thought by some of the parties concerned that there was the possibility of an error in the strength of the silver nitrate. The pathogenesis is not, then, satisfactorily established. This case is not cited against the use of the Cr  d   prophylaxis for ophthalmia neonatorum, but to show that like any other procedure it must be used correctly and with all due precautions.

Dr. Charles H. Long said that when in general work he had taken care of some 1,500 obstetrical cases and all of them were treated with a 1 per cent solution of nitrate of silver. He never had a case of ophthalmia neonatorum. The cases of this disease which he saw were from the practice of midwives and he thought education among midwives should be brought about. Most of them knew nothing of antiseptics and were strangers to what should be done to prevent ophthalmia neonatorum. In his opinion it would be an excellent plan for health officers and medical societies to appoint one meeting a year to discuss

this subject and invite midwives and nurses to be present. In this way much could be done toward educating them along this line. It seemed necessary to have midwives, for without them many cases would have no care at all.

Dr. Clarence Loeb stated that oculists objected to the licensing of optometrists because they did not possess sufficient skill and knowledge to do their work properly, and he believed the same thing should hold true of obstetricians and midwives. The profession of midwifery should not be tolerated in this day of charitable physicians and so many free dispensaries and hospitals. In many states it was obligatory to report all sore eyes of infants and then the health department saw that the cases were properly treated. The Credé method was all right as far as it went, but all cases should be reported with a statement of the kind of treatment used. As to discussing the subject, this had been tried in Missouri a couple of years ago, but they had great difficulty in getting the members of the medical societies to provide a place for such discussions, and the meetings were not well attended. The profession and public were lukewarm. Those who did attend probably learned a great deal, but the majority of them forgot it very speedily. If proper pamphlets could be given to the women at the psychological moment, shortly before the birth of the child, they would probably be impressed and insist upon proper treatment. In his opinion the best plan of education was to teach this subject to the medical schools in a more complete manner, including the prophylaxis. This should be one of the questions on examination day and then men would know, at least at graduation, how to treat and how to prevent it.

Dr. Allport, in closing, said that in most of the laws which had been enacted in the different states it had been specifically stated that all cases of red eyes should be assumed to be ophthalmic neonatorum and so taken care of. His paper dealt with the prophylaxis and not the treatment of ophthalmia neonatorum, which was a large and entirely different subject. He did not wish to be understood as stating that the only thing to be done to prevent this disease was to use nitrate of silver. He believed that was at the present time the only drug to be used, but many other things should be taken into consideration, as was shown in the leaflet which he had compiled for distribution. Prevention begins before birth and the vagina should be properly cleansed so as to provide as clean a passage as possible for the child and other precautions taken. There are various reasons why nitrate of silver did not always prevent ophthalmia neonatorum. It must be properly used; in many cases where the treatment failed the solution did not reach the conjunctiva at all. The solution must be absolutely reliable. He did not know what produced the unfortunate results in the case reported by Dr. Edgar, but it was not due to the nitrate of silver if it was in proper condition when it was used. Dr. Nelson spoke of the late invasion of ophthalmia neonatorum, but in his opinion if this occurred more than three or four days after birth it was due to something that happened after birth and was not a true ophthalmia neonatorum.

As to midwives, Dr. Loeb thought they should be classed as optometrists and he sympathized with that. Theoretically midwives should be abolished; they are not competent to take care of children at birth, but children are being born at a great rate each year and the doctors are not able to take care of them all even if called, and poor people do not indulge in doctors very much anyway. In his opinion it was not practical to attempt to abolish them and as a practical matter they must be educated and retained. The best way to get along with the subject is to try to make the midwives better and educate them as much as possible. With this object in view it might be a good plan to invite them to attend meetings at which this subject is discussed. In the matter of education, legislation went a long way and was very helpful, but people in general must be educated to understand about these things. He was for a number of years general chairman of the Committee for the Prevention of Blindness in connection with the A. M. A. At that time they had local chairmen in every state in the Union except three and there was an organization for the promulgation of knowledge concerning the conservation of vision. Meetings were held to educate the people about the care of their eyes and a series of twenty leaflets were published and distributed

throughout the states; lectures were given to nearly 2,000,000 people and in the neighborhood of 200,000 pamphlets were given out. It was his opinion that this campaign did a great deal of good. It was too much to expect perfection, but we should keep hammering and hammering away and be satisfied with doing all the good we can.

TRACHOMA

Dr. Clarence Loeb stated that this disease had been endemic in Europe since antiquity, although it had been believed that it first appeared in Europe at the beginning of the nineteenth century. It was an interesting commentary on the improvement in prophylaxis and hygiene since that time to note the rarity of the disease in the armies engaged in the present war. With the possible exception of the negro, no race and no land is free from trachoma, but certain areas seem to be more infected with it than others. In the United States it was especially prevalent among the Indians, in the mountains of Kentucky, and in the eastern centers of immigrant population. This wide dissemination of the disease was important for two reasons: First, because its destructive effect upon the eyesight was daily adding to the quota of the blind of every nation, and, second, because its infectious character made even a single case a source of danger to the community in which it existed. It had been estimated that 9.4 per cent of all blindness was due to trachoma, and that this disease could be classed among the preventable causes of blindness. It was a disease primarily of the conjunctiva, although its influence in causing blindness was exerted through the complications affecting the cornea. Its pathologic anatomy consists in numerous local inflammatory infiltrations of the conjunctival tissue. These enlarge and form the "granulations" which are characteristic of the disease. These may be present as isolated follicles, more or less hidden by the hypertrophied conjunctiva, which takes on a papillary character or the follicles themselves may be so numerous as to be the predominant feature of the disease. Finally there may be any stage of gradation between these two forms.

As to etiology, little could be definitely stated. The disease is highly contagious, but its transference is brought about only by actual contact of the non-affected eye with some article contaminated by the secretions of the affected eye. While not contagious in the same sense as influenza and similar diseases, it is probably caused by some micro-organism, the nature of which has not been satisfactorily settled. The symptoms of trachoma vary with the stage of its development; in the beginning the patient may be very little inconvenienced or there may be fulminating symptoms. The cicatricial stage is marked by the appearance in the conjunctiva of fine, white lines, which increase in length and width, forming a network in whose interstices the remnants of conjunctiva appear as red islands. The amount of scar tissue depends on the age of the process, the severity of the disease and the lack of treatment or its improper character. As the scar tissue contracts the cul-de-sacs are obliterated, adhesions between the ocular and palpebral

conjunctiva develop and the whole conjunctival sac shrinks, drawing the lids close together, limiting their movements and narrowing the palpebral orifice. Eventually the margins and lower parts of the lids will be curved inwards against the eyeball, a condition called entropion. The constant rubbing of the cornea by the eyelashes causes subjectively intense pain and objectively abrasion of the corneal epithelium with opacification of the cornea from a traumatic keratitis, or the formation of ulcers. Whether the result of the trichiasis and entropion is corneal opacity or staphyloma, or both, the net result is the same—complete or almost complete loss of sight.

The treatment of trachoma consisted of three parts. prophylactic, medicinal and surgical, the first of which was the most important. The prevention and ultimate total eradication of this disease, depended upon the ability to isolate the affected individual completely. Places where large numbers of people are in more or less intimate contact should be kept under medical inspection repeated at frequent intervals. As to medical treatment, each physician used the treatment which had proved most successful for him. One of the best remedies was a 1 per cent solution of silver nitrate, especially where there was profuse discharge of corneal ulcers. Loed found that the best results were obtained in all stages by the use of the copper sulphate pencil, applied to the upper fold of transmission once a day so long as any granulations were present. When these were gone it was replaced by 2 per cent zinc sulphate, one drop daily. Throughout the disease the eyes must be cleansed frequently with a saturated solution of boracic acid, which was applied with pledgets of cotton well moistened. If iritis or ulcers develop the use of atropin is indicated, together with smoked glasses, which are also of benefit where there is much photophobia. In the surgical treatment in the beginning of the disease some form of expression of the granulations is to be employed followed by the usual medicinal treatment. In the cicatricial stage the surgical treatment is to be directed against the effect of the trichiasis and entropion. Sometimes a simple canthoplasty is sufficient, but usually it is necessary either to move the lashes further away from the lid margin, or to create a new lid margin, or even to remove the tarsus. An optical iridectomy may be of service in cases of corneal opacities.

DISCUSSION

Dr. W. H. Woodruff, Joliet, Illinois, believed that in the beginning of trachoma when the typical granulations were present there was a very definite indication for the operation of expression and the results were so marked that there was no question about its value. After reaching the cicatricial stage with deformities of the lid there were certain definite conditions to deal with. The narrowed palpebral fissure was dealt with by canthotomy. The ingrown eyelashes were dealt with by the well known Hotz operation or by skin grafting or by marginal mucous grafts. The operation of tarsectomy he considered the greatest triumph of the surgery of trachoma. The one characteristic feature of trachoma was its tendency to relapse. One theory was that it was due to the rubbing of the lid on the cornea and another that it was due to trachomatous disease on the cornea, but there was no question but that the rubbing of the scar tissue of the lid was a very prominent factor and the operation of tarsectomy was indicated in these

cases in which relapses occurred where there was not too great an atrophy of the conjunctiva of the cul-de-sac. The operation was so comparatively simple and the results so certain that it seemed as though anyone who had had experience with trachoma cases and their relapses would be strong advocates for it. It was important that it be done with great care in order to preserve the muscular tissue and nothing be removed except the tarsus and overlying conjunctiva. In removing the tarsus it was important that it be removed near the lid border as possible. At least near enough to take in the longitudinal scar which corresponded to the sulcus subtarsalis, because that was the particular point where the deformity began and where there was nearly always a linear scar.

MACOUPIN COUNTY

The Macoupin County Medical Society met in regular session in the Masonic Hall, Staunton, and was called to order by President A. H. Simmons of Girard.

Twenty-three members and visitors were present.

Dr. A. Tripodi of Benld, Dr. G. W. Westermeier of Cherry, Dr. J. R. Higgins, of Gillespie, Dr. E. E. Bullard, Dr. C. H. Foote of Girard, Dr. I. H. Neece of Palmyra, and Dr. A. H. Hunter of Staunton having been in the U. S. Service, on motion their Annual Dues for 1918 were returned to them.

After having an article in the ILLINOIS MEDICAL JOURNAL regarding a County Health Officer read by the Secretary, Dr. G. E. Hill of Girard was unanimously elected County Health Officer.

A minimum Fee Bill for temporary use, was reported by the following Committee:

Dr. A. H. Hunter, Staunton; Dr. L. D. Rockefeller, Bunker Hill, and Dr. F. A. Renner, Benld.

FEE BILL

Visits in town—day.....	\$ 2.00
Visits in town—night.....	3.00
(Extra for Medicine).....	
Office calls—examination.....	1.00
(Medicine furnished).....	
Country visits \$1.00 per mile plus town visit..	
Confinement—Four hours or less.....	15.00
Each additional hour.....	2.00
Mileage additional.....	5.00
Forceps	5.00
Repair perineum	5.00
Anesthetic	5.00
(plus mileage)	
Fracture and dislocation left to each community.	
Consultation	5.00
(plus mileage)	
Night visit—9 p. m. to 7 a. m.	

Moved that the Secretary be instructed to publish the temporary Fee Bill in pamphlet form and send it to every member in the County, and that it not be published in the papers until the regular Fee Bill is adopted. Carried.

Dr. F. A. Renner of Benld, gave an interesting, comprehensive paper on, "Some Problems in the Handling of the New Born."

The subject, "Summer Complaints in Infants" was taken up in a general discussion and all members and visitors present took a decided interest in the discussion.

Moved that we thank Dr. F. A. Renner for his interesting, comprehensive paper on, "Some problems in the Handling of the New Born." the Doctors of Staunton, for their royal welcome and all others who have helped to make this meeting a success. Carried.

The Censors reported Bunker Hill as the place for the next meeting of the Society.

Adjourned to meet at bunker Hill in September.

T. D. DOAN,
Secretary.

McLEAN COUNTY

The last regular meeting of the McLean County Medical Society was called to order by Dr. Watson Gailey, president, at Bloomington, September 20, 1919.

The program of the evening was the exhibition and report of cases by the members.

Dr. Ralph Peairs, physician in charge of the Soldiers Orphan Home, exhibited a very interesting case of defective palate, a condition which causes the same symptoms as adenoids and enlarged tonsils, often operated on with no results. The operation consists of applying a small device which spreads the palate and which is left in for six weeks. The assistance of a dentist is necessary to accomplish this. This was thoroughly discussed by the members. Others reported some very interesting cases, among which were cases of the so-called "Summer Influenza."

The President, Dr. Gailey, appointed the following committees:

1. Program: Drs. F. C. Vandervoort, Paul Greenleaf and Frank Fisher.
2. Entertainment: Drs. Wm. Young, Guy Sloan and P. L. Noggle.
3. Judiciary: Drs. C. E. Chapin, J. W. Smith and R. A. Noble.
4. Sanitary: Drs. A. W. Myers, W. E. Neiberger, and T. D. Cantrell.
5. Civic League: Drs. Irwin, Ralph Peairs and O. M. Rhodes.

A Sanatorium Advisory Board consisting of five physicians was appointed, Drs. W. W. Gailey, R. A. Noble, A. J. Casner, L. B. Cavins and Ferd McCormick. This advisory board to visit the McLean County Tuberculosis Sanatorium each month.

Suggestions were asked of the members as to the best way to make our meetings more entertaining and more profitable the coming year. There was a large attendance and the meeting was very satisfactory throughout.

A. BERNICE CURRY,
Secretary.

DRUG ADDICTS

September 20, 1919.

Dr. I. L. Beatty,
U. S. Revenue Service,
Springfield, Ill.

We, the committee appointed by the McLean County Medical Society, acting upon your suggestion, and after consideration of the many conditions and circumstances entering into the question of the best method

of caring for drug addicts do submit the following report:

1. We do not believe it necessary to build and equip any new institution for the treatment of such cases, as there are at present ample hospital facilities in both private and public institutions for the care of such cases.

2. We believe the law should enforce treatment of drug addicts, and that when an addict presents himself for treatment or requires any narcotic drug, he should be referred to the County Judge, who will authorize such emergency treatment as would be necessary, and take steps to place the addict in an institution for the cure of his or her habit.

3. Such patients who are financially able to pay for treatment, and who are drug addicts, should have the privilege of being treated by the physician of their choice and their case be registered with the County Judge, to whom the physician shall report the result of his treatment every ten days.

Such patients who are financially unable to pay for treatment should be referred to the County Physician in the county where he resides, the case being properly registered with the County Judge, to whom the County Physician shall report the result of his treatment every ten days. The County Judge should have the power to authorize emergency treatment by telephone when appealed to by a physician located in his county but some distance away, but such cases should be properly reported to the County Judge in writing, who should take the necessary steps to place the patient in an institution for the cure of his habit.

4. Upon the recommendation of the County Judge these patients should be committed to public or private institutions until cured.

5. We believe that the legitimate use of narcotic drugs by reputable physicians should not be interfered with.

6. We believe that the penalty for the violation of the narcotic drug act should be rigidly enforced.

DR. E. B. HART,
DR. A. J. CASNER,
DR. PAUL GREENLEAF

Committee.

DR. W. W. GALEY,
Prs. McLean Co. Med. Society.
DR. A. BERNICE CURRY,
Sec'y McLean Co. Med Society.

RANDOLPH COUNTY

Society met in town park, Evansville, September 11, 1919, where a delightful basket lunch was served by members' ladies, and where also the business meeting of the society was held.

Ten members were present. Dr. J. T. Riess, recently in service but now located in Baldwin, was elected a member for 1919, dues to be paid by society.

Minutes were read and approved, and annual election of officers, for various reasons deferred from meeting in summer, was held. The following officers were elected: President, Geo. Hoffmann; vice-pres-

ident, H. Le Saulnier, and L. J. Smith, secretary and treasurer; censors, J. G. Beattie, J. T. Lloyd and B. Stevenson; legislative committee, A. E. Fritze and C. G. Smith. Special instructions to legislative committee were given by members relative to the new constitution for Illinois regarding proper safeguarding of medical profession.

Motion made and carried to put society's service flag with its three stars, representing Drs. Le Saulnier, Weibusch and Riess, members who were in service, in keeping of secretary, who shall take it to each meeting of society. Drs. Le Saulnier and Riess gave interesting talks on their experiences in service. Also talks on our County Tuberculosis Sanatorium and about getting a nurse, by C. G. Smith, J. W. Wier and Hoffmann, were attentively listened to and discussed by members and ladies, who were invited to hear the discussion on this subject. On motion secretary was asked to write Dr. R. E. Adkins of Springfield to meet with the society members and hold a tuberculosis clinic on October 21, at Sparta. Local members were instructed to see that subjects for clinical study were at clinic.

C. G. Smith and H. Le Saulnier were appointed a committee to visit Dr. Church, a former member of our society, who is now very sick in Red Bud Hospital, and convey to him the society's sincere wishes for his speedy recovery.

Thanks were tendered Dr. and Mrs. Beattie for their hospitality.

Adjourned to meet in Tilden four week from today.

GEO. HOFFMANN, Pres.

LOUIS J. SMITH, Sec'y.

Personals

Dr. Charles F. Lynch, Chicago, has been appointed health officer of Aberdeen, S. D.

Dr. Howard T. Knight, following discharge from the service, has resumed practice in Elgin.

Dr. A. F. Mueller has returned from service and resumed practice in McHenry.

Dr. J. G. Maxon has returned from service and resumed practice in Harvard.

Dr. John A. Hale has removed from Alto Pass to Bush.

Dr. H. R. Rogers has returned from military service and resumed practice in Rockford.

Mr. F. M. Elliott, founder, and for twenty years president of the Evanston Hospital, died suddenly at his home in Evanston, September 16.

Dr. William R. Marshall, Clinton, has been elected president of the Black County Anti-Tuberculosis Association.

George G. Davis, Lieut.-Col., M. C., U. S. Army, Chicago, has recently been discharged from military service and has returned home.

Dr. Edwin W. Ryerson, Chicago, after release from the service at Fort Sheridan, made an extended motor trip through the east.

Dr. and Mrs. Arthur A. Small, Chicago, returned last month from their summer camp in Canada.

Dr. Charles Morgan McKenna announces resumption of practice, limited to genito-urinary surgery, at 25 East Washington street, Chicago.

Dr. George S. Duntley, Bushnell, since his discharge from army service, has taken an outing in Wisconsin.

Dr. O. F. Allen, who has practiced in Mt. Olive nineteen years, will remove to Miami, Fla., after taking a post-graduate course in New York.

Dr. J. H. Bryant has returned to Galesburg after a trip to Alaska following his discharge from military service.

Dr. S. L. Thorpe, Clinton, received a commission as Major following his return from Manila, where he was in charge of eye, ear, nose and throat work.

Dr. Harry E. Mock, Chicago, has again been commissioned Colonel, M. C., U. S. Army, and appointed delegate to the International Conference to be held in Rome, next month.

Dr. H. B. Roberts of Highland Park, surgeon to the Chicago, North Shore & Milwaukee Railroad, has been commissioned Major, Medical Corps, U. S. Army, for services in France.

It is reported that Dr. C. O. Schnider, health commissioner of Winnetka, advises the residents to wear influenza masks all the time when outdoors.

Clarence L. Wheaton, Major, M. C., U. S. Army, Chicago, was honorably discharged from military service at Camp Grant, September 19, after twenty-two months of continuous service at the camp in charge of the tuberculosis work.

Dr. J. E. Walton, in general practice in Medora, and after six months service in the Army Medical Corps, in which he holds a reserve commission, grade of Captain, has removed to Alton, where he is located at 3016 College Ave.

Dr. Arthur M. Corwin, Chicago, addressed the City Club of Decatur, September 12, on "The Grounds of Optimism in the Outlook" and read a paper at Detroit recently on the "Treatment of Influenza-Pneumonia."

Dr. Frederick A. Causey, formerly physician to the Peoria State Hospital, discharged from military service in June, has been appointed associate medical director of the Peoria Life Insurance Company.

Dr. Frank C. Murrah, after twenty-seven months military service, has resumed practice in Herrin. Dr. Murrah was discharged from service with the rank of Major and for fifteen months was on active duty as regimental surgeon in Europe.

Dr. Louis J. Pritzker announced that he has resigned as head of the department and professor of obstetrics at the Chicago Hospital College of Medicine (or Chicago Medical School) and thus severed any and all connections with that institution.

Lieut.-Col. George de Tarnowsky has returned to Chicago after an extended service abroad with the army in the war zone and with the American Red Cross in Poland and southeastern Europe, and has resumed practice at 30 North Michigan avenue.

When returning from the Tri-State meeting in Rockford, Dr. W. G. DuFour's automobile turned over on a culvert on the road to Batavia. The Doctor's sister, Mrs. A. F. Fraser of Chicago, received a fracture of the skull and died at Rockford Hospital. The Doctor was not seriously injured.

Dr. A. H. Wales, who served as captain, Medical Corps, U. S. Army, with Base Hospital No. 38 of Philadelphia, at Nantes, France, has been discharged from military service and has removed from Lanark to Winnetka.

News Notes

—The new tuberculosis sanatorium for McLean county, Fairview, located just north of Normal, is now in full running order; almost all of the beds are occupied, and many patients are already showing improvement and increase in weight.

The Chicago Training School for Home and Public Health Nursing, graduated its first class, numbering over 800 women, with a banquet at the Municipal Tuberculosis Sanitarium, September 30. Over 600 applications had been received at that time for the second course beginning October 6.

—The University of Illinois, College of Medicine, reports that for all classes matriculating in 1917 and thereafter the students are required to complete a five-year course, including a year's internship in a hospital, before the M. D. degree will be conferred. This is the ninth medical school to adopt this requirement.

—Mrs. Emma Calvin, a chiropractor of Monticello, was arrested by the Illinois Department of Registration and Education for practicing without a license and was fined \$150 and costs. This is her second offense. It is understood that Mrs. Calvin will carry the case to the supreme court in order to test the validity of the recent medical practice act.

—H. C. Crabtree of Freeport and Samuel Leonard of Shannon, Carroll county, were arrested by the Illinois Department of Registration and Education for practicing medicine without a license and were fined, respectively, \$50 and \$100 and costs. The public school nurses of Carroll county aided the department in securing the necessary evidence against Leonard.

—The enlisted men of Base Hospital No. 12 recently sent their commanding officer a hand hammered sterling silver platter engraved with the following inscription: "Presented to Major Payson L. Nusbaum, Chicago, commanding officer at Base Hospital No. 12, by the enlisted men of that organization on completion of twenty-two months of active service in France as a token of their esteem and regard."

—Dr. Walter B. Helm, Rockford, was named head of the Tri-State Medical Association. Doctor Helm was former Illinois vice-president of the association. Dr. E. B. Coolley, Danville, succeeds him as state vice-president. Dr. G. V. I. Browne, Milwaukee, Wis., and Dr. John O'Keefe, Waterloo, Iowa, were chosen vice-presidents for Wisconsin and Iowa. Dr. William Peck of Freeport will be business manager. Waterloo has been chosen for the convention next fall.

—It is reported that D. H. Prince of Love's Park was arrested recently by the Illinois Department of Registration and Education for practicing medicine without license and was fined \$100 and costs. Prince was charged with diagnosing an ailment of a young woman in Rockford as goiter and was said to be receiving for medicine a large part of the money contributed by the charitable workers of Rockford for the support of the family of the young woman. At the trial Prince was compelled to return all the money he had received for his so-called professional treatment.

—The Chicago Municipal Morals Commission, August 30, inaugurated a movement to rid the city of vice and venereal disease. The plan provides for the segregation of all infected persons and a fund of \$120,000 appropriated by the state and city government has been made available for carrying on the work. It is proposed to organize a special vice squad, and all suspects will be sent to the Iroquois Memorial Hospital for examination, and if found affected will be held until cured. The president of the county commissioners of Cook county has been asked to set aside a large ward in the Cook county Hospital for the treatment of these cases.

—Owing to the increased cost of living and of all articles entering into the practice of medicine, the physicians of Park Ridge and Edison Park announce the adoption of the following scale of charges. After September 1, 1919, the minimum charge for services will be as follows: Day visits, \$2.50; office consultation, \$1.50; night visits, \$3.50; contagious cases \$3.00 per visit. More than one patient at a visit charged extra. Telephone consultation charged same as an office consultation.

Signed

G. H. FRICKE

T. E. CONLEY

S. A. WOODWORTH

L. C. HEDGES

WM. M. FRIEND

I. J. PASCOE.

—Julius Rosenwald, capitalist and philanthropist of Chicago, has again reached out his hand to the negro. He has offered six scholarships of \$1,200 each for negro graduates of American medical colleges who wish to take post-graduate work in pathology, bacteriology, physiology, pharmacology or physiological chemistry. The general education board of New York has made announcement of the scholarship offer. Appoint-

ments are to be made next year. The committee to elect the students comprises: Dr. William H. Welch, Johns Hopkins School of Public Health, chairman; Dr. David L. Edsall, dean of the Harvard Medical School, and Dr. Victor C. Vaughan, dean of the medical department, University of Michigan. Abraham Flexner, secretary of the general education board, will act as secretary of the committee.

—Work is expected to start within sixty days on the \$5,000,000 group of hospital buildings to be erected by the state for the University of Illinois on the site of the old Cubs ball park at Wood and Polk streets. According to the architects, Schmidt, Garden & Martin, it will take about three years to complete the group. It is claimed that nothing like this plan, either in conception or magnitude, has been undertaken by any other state.

By a joint agreement the state department of public welfare will operate the group as to administrative features and the University of Illinois College of Medicine will undertake the professional work, including teaching and research.

At the beginning the group will include the Illinois Charitable Eye and Ear infirmary, the State Psychopathic Hospital, the State Surgical Institute for Children, and a clinical hospital, money for all of which is now available.

The architectural style will be Elizabethan, with small courtyards surrounding a large inner court with lawns and shade trees. Wards will open on this, giving patients a vista of green with street noises and dust eliminated. An attempt will be made by the architects to do away with the suggestion of a public institution—different colors will be used for roofing and different materials in the outside wall construction of the various buildings.

Marriages

MERTON O. ARNOLD, Chicago, to Miss Urcell V. Senneff of Dixon, Ill., June 20.

THOMAS BARRETTE BOLAND, Chicago, to Miss Ethel Johnson, at Milwaukee, August 20.

ANSON M. CAMERON to Miss Alta Stevens, both of Chicago, September 20.

HENRY J. DEHAAN to Miss Fannie Haislip, both of East St. Louis, Ill., September 3.

HARRY FREY, Rock Island, Ill., to Miss Helen M. Somers of Grinnell, Iowa, September 2.

LYNDON DENNY HARRIS to Miss Elsie Marie Gonnerman, both of Chicago, recently.

OTTO JOHN JIRSA to Miss Blanche Rezanka, both of Chicago, recently.

JEREMIAH A. O'CONNOR to Miss Katherine Spoeri, both of Chicago, August 30.

WILLIAM LACEY EDMUNDSON, Major, M. C., U. S. Army, Denver, to Miss Dorothy Peacock Hunnewell, at Wilmette, Ill., August 16.

Deaths

JOHN C. HELPER, Woodriver, Ill.; Eclectic Medical Institute, Cincinnati, 1881; aged 61; died at the home of his daughter in Abilene, Kan., September 1.

WALTER MAY FITCH, Chicago; Rush Medical College, 1885; aged 57; died at his summer home in Twin Lakes, Wis., September 11, from heart disease.

JOHN JOSEPH BARTH, Chicago; Rush Medical College, 1914; aged 33; a Fellow, A. M. A.; died in the Alexian Brothers Hospital, Chicago, August 29, from septicemia.

JOSEPH VAN METER CHAMPION, Mansfield, Ill.; Rush Medical College, 1885; aged 62; a Fellow, A. M. A.; died at his home, August 7, from valvular heart disease.

EDWARD MALCOLM BRUCE, Chicago; Hahnemann Medical College, Chicago, 1891; aged 58; professor of internal medicine in his alma mater; died at his home, September 8, from cerebral hemorrhage.

HERBERT B. PERRY, Benson, Ill.; Jenner Medical College, Chicago, 1896; aged 60; a member of the Illinois State Medical Society; died in Brokaw Hospital, Bloomington, Ill., August 25, from nephritis.

GEORGE L. B. ROUNSEVILLE, Mattoon, Ill.; Bennett Medical College, Chicago, 1883; aged 74; died in Cook County Hospital, Chicago, August 15, from valvular heart disease.

JOHN R. BOYNTON, Chicago; Hahnemann Medical College, Philadelphia, 1880; formerly president of and professor of surgery and clinical surgery in Hering Medical College, Chicago; died in the Wabash Valley Sanitarium, Lafayette, Ind., August 22.

NELSON K. McCORMICK, Normal, Ill.; Northwestern University Medical School, Chicago, 1886; aged 57; president of the board of directors of Brokaw Hospital, Bloomington, Ill.; died in Petoskey, Mich., July 26, from nephritis.

ARTHUR VINCENT FRAY, Chicago; Jenner Medical College, Chicago, 1906; aged 55; a Fellow, A. M. A.;

a specialist in diseases of the eye, ear, nose and throat; died in St. Luke's Hospital, Chicago, September 7, from carcinoma.

GEORGE ELLSWORTH PAFF, Chicago; Indiana University, Indianapolis, 1908; aged 35; formerly of Gary, Ind.; died in the Grace Lutheran Sanatorium for Tuberculosis, San Antonio, Texas, about August 20, from tuberculosis.

JOSEPHINE ELIZABETH SMITH, Chicago; Rush Medical College, 1917; an interne at Cook County Hospital until February 28, 1919; who passed the examination of the National Board of Examiners in October, 1917; a Fellow, A. M. A.; died in the Washington Boulevard Hospital, Chicago, August 5, from acute lymphatic leukemia.

HENRY HOOPER, Chicago; Harvard University Medical School, 1869; aged 75; a Fellow, A. M. A.; for half a century an esteemed and beloved practitioner of Chicago; emeritus professor of obstetrics in the Chicago Policlinic; obstetrician to Passavant Hospital and St. Mary's Maternity Hospital for many years; treasurer of the Policlinic and Henrotin Hospitals; died at his home, September 17.

JOSEPH POGUE, Edwardsville, Ill.; Pennsylvania Medical College, Philadelphia, 1852; aged 84; who served throughout the Civil War, first as surgeon in chief of Burgess' Sharpshooters with the rank of major, and later as chief of the operating board; one of the organizers of the Madison County Medical Society, its secretary in 1857, and one of the chief promoters on the occasion of its reorganization in 1903; a surgeon of marked ability; died at his home, August 19, from pneumonia.

JOSEPH ZEISLER, Chicago; a Fellow, A. M. A.; died suddenly in the Grand Hotel, Mackinac Island, Mich., August 31, from angina pectoris; aged 60. Dr. Zeisler was born in Bielitz, Austrian Silesia; was graduated in medicine from the University of Vienna in 1882, and after serving as an interne in the Vienna General Hospital for two years, came to America and settled in Chicago in 1884. In 1888 he began his teaching career as professor of skin and venereal disease in the Post-Graduate Medical School; a year later he became professor of dermatology in the Northwestern University, Woman's Medical School, Chicago, and in the same year was made professor of skin and venereal diseases in the Northwestern University Medical School, holding the latter position as professor emeritus at the time of his death. He was chairman of the Section of Dermatology of the American Medical Association in 1912-1913, president of the Chicago Dermatological Association in 1904 and 1914, and president of the American Dermatological Association in 1903-1904; he was also chief dermatologist to Mercy, Wesley and Michael Reese hospitals, and to the South Side Free Dispensary. Dr. Zeisler in addition to his professional attainments was a man of charming personality, a musician of high ability, and took a great interest in arts and letters.

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Original Articles

PRACTICAL PRINCIPLES FOR PROTECTION AGAINST CANCER*

A. J. OCHSNER, M. D.
CHICAGO

The importance of the subject is urged because in the United States reliable statistics show that annually approximately 100,000 persons die of cancer, a number twice as great as the entire number of Americans who died of wounds during the present war. During the next ten years one million of the present inhabitants of the United States will have died of cancer unless we are able to introduce practical principles of protection.

Statistics have been investigated which seem to show that cancer of the stomach and intestines causes a high mortality in people eating an abundance of vegetables which have been fertilized with human excrement, while in the same people skin cancer may be exceedingly rare provided the people are scrupulously clean and vice versa.

The importance of preventing chronic irritation from mechanical, chemical, thermal causes, from old scars and from x-ray is emphasized.

In considering the subject of contagiousness or infectiousness of cancer, the similarity of the arguments employed before the last quarter of the last century to prove that tuberculosis and leprosy are non-contagious and non-infectious, and the arguments which are employed at the present time to prove that cancer is non-contagious and non-infectious is pointed out.

A warning is given against committing the ancient logical fallacy according to which the

absence of conclusive proof is sufficient to disprove a fact.

Racial differences as to frequency of cancer are explained by differences in cleanliness in food and person.

Heredity is difficult to analyze because parents and offspring live under identical conditions as to hygiene, nutrition and cleanliness.

Judging from a study of statistics and reports of scientific studies, and from personal observations, the following conclusions seem warranted:

1. The medical profession and the lay-public must be taught to appreciate the fact that cancer is primarily a local condition.
2. Unless recognized and removed early it is usually fatal.
3. A careful examination should invariably be made the moment cancer is suspected.
4. If uncertain about a diagnosis, the opinion of a consultant with wider experience should be sought at once.
5. During the cancer age, which is, generally speaking, over forty years, in case of doubt the tumor should be removed immediately and thoroughly.
6. Inoperable cancer should be removed only with the distinct understanding by the patient's friends that the operation is palliative for the purpose of reducing suffering.
7. Violent manipulation for diagnosis and treatment must be avoided.
8. All sources of chronic irritation of tissues must be eliminated.
9. Cleanliness of the skin must be taught and practiced.
10. All articles of food which have come in contact with manure or human excrement in the form of fertilizer must be boiled before eating.
11. Sewage must be disposed of so as not to contaminate human food or water.

*Abstract read before the Tri-State Meeting at Rockford, Illinois, September 4, 1919.

EXTRA-DURAL IRRITATION AND
ABSCESS.*

R. H. GOOD, M. S., M. D.

CHICAGO.

In presenting this paper the author hopes to contribute something to the subject which will help to early recognize the symptoms of extra-dural irritation or abscess, so that by early exposure of the dura many serious and fatal complications may be prevented.

The dura is composed of two layers, the outer or periosteum and the inner or vascular. It lines the cavity of the skull like periosteum and surrounds all the nerves and bloodvessels at the openings into the skull and joins with the periosteum on the outside of the skull. The inner layer only of the dura surrounds the optic nerve all the way to the eye ball. This explains why toxins in the orbit so easily gain access to the optic nerve causing optic neuritis or meningitis. The dura not only lines the skull, but extends deep between the hemispheres of the brain, forming the falx cerebri and falx cerebelli as well as separating the cerebellum from the cerebrum by the tentorium cerebelli.

The dura is extremely vascular, enveloping nearly all the large arteries and veins in the skull. The anterior fossa is supplied by the anterior meningeal branches of the ethmoid arteries and internal carotid; the middle fossa by the middle meningeals, branches of the internal maxillary, the recurrent from the lacrimal and the ascending pharyngeal branches from the internal carotid; the posterior fossa by the posterior meningeal branches from the vertebral and the meningeal branches of the occipital arteries.

All this blood is carried away from the head by the venous sinuses which are all in the dura. I have emphasized the above to show that any slight hinderance of the return circulation in the dura may cause capillary edema and produce marked symptoms. The skull cavity is completely filled with tissues and any slight increase or decrease in its contents will produce symptoms.

The dura is also well supplied with nerves and is, therefore, a very sensitive organ and very painful on manipulation, whereas the brain tissue itself is not sensitive and can be handled without pain. The nerves supplying the dura are the recurrent branch of the fourth, branches from

the ophthalmic, hypoglossal, sympathetic, filaments from the Gasserian ganglion and recurrent branch given off from the root ganglion of the pneumogastric nerve.

Etiology: The etiology of extra-dural irritation may be classified under mechanical and infective irritants.

Under mechanical irritants we have foreign bodies, such as bullets, etc., adjacent to the dura; fracture of the skull with depression of spiculae of bone pressing against the dura. Extra-dural hemorrhage accompanying fractures is very frequent. Absorption of the blood clot without infection will leave a deposit of lime salts on the dura, according to Dr. C. C. Rogers, having the feeling and appearance of sandpaper and causes very severe headaches. Decalcification and swelling of the skull bone, due to altered internal secretions, may irritate the dura, providing the bone thickens or swells and pushes against the dura.

Under infective irritation of the dura we have acute and chronic purulent infections of accessory sinuses of the nose such as the frontal, ethmoidal and splenoidal sinuses, as well as suppurative infections of the middle ear, that is, the tympanic cavity, attic, mastoid and mastoid antrum. Chloesteatoma of the above mentioned structures produce only mild symptoms of extra-dural irritation.

Infection of extra-dural blood clots will form an extra-dural abscess. Infective irritants are usually extra-dural abscesses, but I have had a number of cases where there was granulation tissue on the dura opposite a mastoid antrum chronic suppuration, without the formation of free pus, but in reality is an extra-dural abscess, which is explained by the fact that the drainage through the ear was sufficient so as not to push the pus into the extra-dural space. The tegmen in these cases is usually necrosed, but granulations may appear on the dura opposite a chronic infection without complete necrosis of the bone. In other words, if the mucous membrane is diseased or lifted from the bone, the toxins may pass through the haversian canals and fissures in the bone, as well as along blood and lymph vessels in the bone.

Tuberculosis and syphilis of the skull or dura are well known etiologic factors.

Symptoms: The symptoms depend upon 1, the amount of pain the patient can endure from the

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mechanical irritation of the sensitive dura; 2, the severity of the infection and the extent of the edema of the dura, and 3, the degree of intracranial pressure.

In mechanical non-infective irritations of the dura, headache is the principal symptom. The pain is always localized in the same point and may radiate in all directions. By very hard pressure on the skull over the painful area, the pain may be greatly increased. The headache is increased when blood rushes to the head from mental exertion, after heavy meals, when fatigued, or at night when lying down. There may be mild projectile vomiting and dizziness during the paroxysms of extreme headache. The mind may be sluggish and epileptoid spells may accompany the paroxysms of headache. The pulse, temperature and respirations, as well as the blood, are usually normal.

In the infective type of irritation, especially in acute cases, the symptoms are more pronounced. Acute mastoiditis or sinusitis are the most frequent cause. The discharge from the ear or sinus may suddenly stop or diminish, indicating that it may have ruptured into the extra-dural space. The headache, projectile vomiting and dizziness are more pronounced. The prostration is greater, although the patient may go about. He shows signs of sepsis. The mental symptoms are more pronounced in that the patient is indifferent to his surroundings; may not ask for food, but if fed digests it. The patient is also slow in answering questions. When a large abscess or blood clot forms, he may have hemiplegia and go into coma. The temperature frequently drops to sub-normal, as low as 96.5, and lingers between this and 100, no matter if the temperature of the patient was 104 before the abscess in the mastoid or sinuses broke into the extra-dural space. The pulse may drop to 50 or even less, depending upon the amount of intra-cranial pressure. The respirations may become as slow as 10 per minute in pronounced cases. The blood examination is almost without value as there may be only a slight leukocytosis and at times an increase in the pollys. Frequently the blood is normal. The blood pressure is increased. When the abscess makes enough pressure to loosen the dura a little further from the skull, the symptoms may suddenly become less severe for several hours, only to reappear when the abscess becomes a little larger.

Extra-dural abscesses of attic origin occasionally cause a paralysis of the external rectus of the same side, which occurred in three of my cases. Choked disc is occasionally found in patients with much edema of the dura or large extra-dural abscess.

Chronic infective irritation of the dura is due to chronic suppuration of the sinuses or mastoids. There is a chronic discharge from the sinus or ear, as the case may be, and the bone between these structures and the dura is necrosed so that granulations may be found on the dura. The bony wall may not be broken down, but the toxins may pass through the bone if the mucous membrane is diseased and form granulations on the dura. If the drainage is sufficient so as not to form an extra-dural retention of pus, the symptoms of extra-dural irritation may be very mild. The pain is usually intermittent in these cases, depending largely upon the resistance offered to the pus in draining through the ear or sinus duct. It may be severe enough to keep the patient from work. On careful inquiry we find the patient has occasional spells of dizziness and mild manifestations of cerebral vomiting. The temperature lingers toward the sub-normal, 97 to normal. The pulse is usually slow. Occasionally we find mental symptoms such as indifference to work, or slowness in answering questions. One patient of mine slept for 36 hours, waking up occasionally to eat and talk with his wife. Hard pressure over the area may or may not increase the pain, depending upon the strength of the bone over the area. If the patient is not operated on, before death he will have a pulse of 120 instead of 50 and a temperature of 102 instead of normal, also respirations 30 instead of 10 and the blood pressure 90 instead of 180. When this change has come about, it is too late to operate as the patient will die.

The Abderhalden serological test for intracranial lesions as carried out by Dr. J. W. Retinger at the Durand Hospital for Infectious Diseases seems to be of great diagnostic value. Dr. Rogers has had a number of cases in which Dr. Retinger made the Abderhalden test and on operation Dr. Rogers found the findings of the Abderhalden correct in all cases. I have had the blood in one case tested by him in which he reported no lesions of the brain, but an irritation of the dura in the Broca's area on the left side,

which corresponded to my diagnosis and later I corroborated it by surgery.

Complications: The complications are brain abscess, meningitis and thrombosis of the lateral or cavernous sinuses. If the abscess breaks very gradually through the dura and the toxins enter the subdural and sub-arachnoid spaces, but become circumscribed, we have the symptoms of a leptomeningitis.

Treatment: Extra-dural irritation, except when caused by syphilis, should be relieved by removing a plate of skull over the area involved. In mastoiditis accompanied by symptoms of extra-dural irritation, I invariably expose the lateral sinus and the dura over the mastoid antrum. I expose both sufficiently to be able to make a thorough examination of the dura and sinus which at the same time establishes ample drainage.

In sinusitis of the frontal, ethmoids or sphenoid, I do a thorough intra-nasal operation and then keep the patient under close observation for a few days, taking the temperature, pulse and respiration every three hours. If the symptoms still persist, I do an external operation on the frontal sinus and remove the posterior wall as far as necessary to reach the abscess and thus expose the dura. The dura must never be opened in these cases, as going through an infected field would nearly always develop a meningitis.

GLAUCOMA.

H. W. WOODRUFF, M. D.

JOLIET.

The broad title of this paper does not mean that all phases of the subject will be dealt with. No attempt will be made to take up the question of etiology, diagnosis or general treatment. In order to make the paper short and to the point I have narrowed it mostly to local treatment. Some of the later theories of the cause or causes of glaucoma are indeed important; but the trend of thought is toward a general cause or one remote from the eye itself as an exciting cause with certain local structural changes as predisposing causes. This naturally leads to the investigation of other organs for possible pathologic foci, the proper therapy of which should form no small part of the treatment of this disease. Also my remarks will apply more to the chronic simple glaucoma than to the congestive or secondary form.

The importance of making an early diagnosis applies with great force to glaucoma.

In our campaign for the prevention of blindness we should bring this subject more frequently before our respective county societies.

The general practitioner is so apt to see cataract and only cataract in people of advancing years, with failing vision, that many cases of glaucoma are permitted to go on to blindness or near blindness without treatment. While this statement applies with greater force to the non-congestive form, the chronic simple variety, it also applies sometimes to the congestive forms.

The treatment of cataract may be delayed for an indefinite length of time without disaster, but long delay is fatal in glaucoma.

With the specialist, however, diagnosis is not the difficult problem so much as the treatment. With most of us the treatment seems to narrow down to myotics, iridectomy or trephining; although there are some 30 other operations.

Not many place much faith in myotics except as a temporary expedient or in inoperable cases with the hope of delaying the process.

If the myotic treatment is to be used at all, no better method can be followed than that of Posey, which is as follows:

The myotics which are best adapted to control intra-ocular tension are physostigmin (eserin) salicylate and pilocarpin nitrate. The salt of physostigmin is more persistent in its effects and less changeable in solution than other salts of the drug and is less irritating to the conjunctiva. I prescribe a solution of pilocarpin to be used about every four hours, morning, noon and evening, and one of physostigmin of twice the strength at bedtime, thereby avoiding in a measure the blurring of vision which is occasioned by the action of the physostigmin on the ciliary muscle during the day, while the eye receives the greatest effects of the drug during the eight hours or more which elapse between the instillations of the drops during the night. In incipient cases of the disease an excellent initial dose is that of $\frac{1}{8}$ grain pilocarpin to the ounce of water. The strength should be gradually increased, so that at the end of a year 1 grain to the ounce is employed, at the end of the second year 2 grains, and at the end of the third year 3 grains to the ounce solution. This strength will suffice to maintain the pupils at the desired point of almost pin-point contraction. Physostigmin should be employed in half the strength of pilocarpin and should be increased in solutions of equal proportions.

The general opinion, however, seems to be that there is only an occasional case which will do well with this treatment.

April 10, 1915, Joseph Hirsch, age 44 years, was

admitted to the Eye and Ear Infirmary with a blind right eye and vision of hand movements in the left lower temporal field. He had had an iridectomy in the blind eye without results. He declined operation in the left eye, saying that the result had been so bad in the right eye that he wanted medicine used. He was at once put on the eserine treatment and began to improve at once.

His vision and field improved steadily for six months when he passed from our observation. At this time his vision had risen to 20_{80} with a 1⁷⁵ lens, a most remarkable result, and it is unfortunate that the case could not be kept under observation longer.

De Wecker is said to have made the statement that "If myotics have never cured a case of glaucoma, they have prevented many glaucomatous patients from being cured."

Patients will often use this treatment without reporting to their oculist until vision or fields have been much reduced.

Posey has very forcefully called attention to the myotic treatment and has reported some very wonderful results.

One case in which normal central vision was maintained fourteen years with a field cut almost to fixation, and yet he says:

My observations have convinced me that myotics cannot be regarded in any sense as curative, for notwithstanding their continuous use, the glaucomatous process still goes on, very slowly, it is true, but the eye grows steadily harder, the excavation becomes broader and deeper and anterior chamber shallower. Again, I desire to emphasize what I have already said elsewhere, namely, that myotics should be relied on as the sole means of treatment only in those cases which are free from attacks of so-called glaucomatous congestion, the presence of such congestive symptoms being in my opinion the chief indication for some form of operative treatment, be it iridectomy, cyclo-dialysis or trephining; and second, that to gain the full benefit of myotics it is necessary that they should be administered properly. Beginning in doses small enough to avoid creating spasm of the ciliary muscles, and rapidly increasing the dose until the pupil of the affected eye is strongly contracted, this degree of contraction should be maintained as long as life lasts by gradually increasing the strength of the solution, from time to time, and by instillations of the drug at intervals of every 3 or 4 hours.

I am not opposed to the myotic treatment if the patient can be frequently seen, so that vision fields and tension can be taken. If any one of these symptoms is growing worse under the treatment then operation should be advised.

Four years ago I read a paper before this section on "Trephining versus Iridectomy." I have since then become more of an advocate of the trephining operation in the simple chronic

forms of glaucoma. I believe most failures are due to improper technique. I have been a close observer of Col. Elliott's method and believe that it offers the best chance of retaining vision present at the time of operation and occasionally even an improvement is obtained, as the following case illustrates:

July 2, 1917, Mrs. M. P., aged 64 years, came with absolute glaucoma in left eye and light perception only in the right eye. After a trephining operation on the right eye this patient recovered vision of 10/200 and was able to go about her own house with comparative ease, and bids fair to retain this vision indefinitely. I mention this case to show that it pays even in the most hopeless to do something if there is light perception.

I follow Elliott's method in the main. I prefer the Elliott's original trephine to the later Elliott, also the Woodruff dissector for splitting the cornea.

Elliott advises using the trephine so that the disc is not entirely cut through on its sclera edge and removing iris and disc with one cut of the scissors. I prefer to cut the iris with the DeWecker scissors and remove the disc with the Stevenson punch, an instrument designed for removing pupillary membranes. Elliott also advises that no sutures are required for the conjunctival flap. I prefer to use an uninterrupted suture without tying it. Inasmuch as there is no tension on the suture this serves to keep the flap in place and is easily removed.

Elliott suggests that the conjunctival flap be thick, so as to avoid the danger of late infection.

All patients who have had this operation should use daily or twice daily a wash of boric acid solution followed by a solution of sulphate of zinc. Cases which become infected are not necessarily lost if seen early, as deep sub-capsular injections of the cyanide of mercury are as effective here as in other infections of the anterior segment of the eye.

C. F., aged 46 years. Four years after a trephine operation in a blind glaucomatous eye infection occurred. Patient presented himself one day after he noticed redness in the eye. Hypopion was present. Two cyanide of mercury injections with hot applications were made. Patient recovered entirely in ten days.

The principal points which I desire to make are:

1. Presentation of the diagnostic side of the subject to the general practitioner so that early treatment may be instituted.

2. Myotic treatment occasionally yields good results, but should only be used on patients who can be kept under frequent observation so that tension, vision and fields can be taken.

3. The Elliott trephine operation offers the best in the treatment of the non-congestive forms. Failures mostly due to poor technique.

4. Use prophylaxis against late infection and cyanide of mercury injection if infection has occurred.

TRANSACTIONS

¹Section Ophth. A.M.A., 1914.

²Section Ophth. A.M.A., 1914.

DISCUSSION

Dr. George Suker (Chicago): I agreed thoroughly that the faulty results due to the Elliott operation are those of technique. There isn't any need of losing an eye by secondary infection from an Elliott operation providing that the technique is correct. Faulty results following the Elliott operation are due to puncturing the conjunctival flap in making the dissection of the cornea.

He suggested the use of the angular keratome to avoid perforating the conjunctiva.

He also agrees that it is a wiser plan to do the two-stage operation, that is, dissect the sclera and then do the iridectomy when necessary. An absolute iridectomy is not necessary in any of the operations.

Dr. Michael Goldenburg (Chicago): Thought it well enough to use myotics for a little time, but would let no case get away without urging and, in fact, insisting upon some operative procedure.

Relative to the trephine operation, he had two slides showing where the trephine had gone through all the layers of the cornea except the Descemet's membrane, which curls under. The men who performed this operation were most competent men.

A recent article published in the *Archives of Ophthalmology* has photomicrographs of the trephine operation wherein this opening, owing to the marked reaction, is immediately closed by exudate in the form of connective tissue.

The cyclodialysis operation today is a thing of the past, yet it doesn't seem to make a great deal of difference, when the matter is all summed up, what sort of a surgical procedure we use, we seem to get results, but not by myotics. He is very enthusiastic about the iridotasis operation.

Dr. Oliver Tidings (Chicago): Regards the iridotasis operation as being infinitely safer than anything else. Though doing the Elliott operation in quite a few cases with good results, yet the reports coming from the various operators of the country have got him away from the operation.

Dr. Woodruff (Closing discussion): Dr. Suker refers to the keratome for the dissection of the flap. You will find that instruments which are made for the purpose of doing dissections are not planned on that pattern. Take Freyer's knife for dissecting the mucous membrane of the nose and doing the submucous operations; I have sometimes used that for

this very purpose when I didn't have any other dissector to use, and it worked admirably.

With regard to removing the button or disc before doing the iridectomy, the objection to that is that the iris very readily goes back into the anterior chamber. It is not easy to do an iridectomy after the iris has gone back into the anterior chamber through the small two millimeter opening. Dr. Goldenburg brought up the question of iridotasis. It has always seemed to me, while I have done a number of those operations, also the thread operation, as though that was one of the most inconsistent things that an oculist could do. I know if it is a condition where the vision is going to go anyway, that it may be justifiable, but it seems to me that if you can do a trephining operation and get a clean opening there, free from any foreign body, it is much better and safer for the future of that eye.

Regarding Dr. Tydings' reference to the bad results: That is the reason why it has taken me a good many years to become an advocate of the trephining operation. I have gone through all these different stages and was very loath to leave the operation of iridectomy. I have done the operation of iridectomy several times on the same eye with the hope that the iridectomy would finally do the business, and it will, sometimes, even in the chronic form, but I now believe that the trephining is the operation that is the choice in chronic simple glaucoma and should even be followed by a second one if the tension is not relieved.

HEREDITY IN MYOPIA.

HEMAN H. BROWN, M. D.

CHICAGO.

In presenting a paper on the subject of myopia, I may be presuming upon your time. However, I consider it one of the important chapters in ophthalmology.

We were taught in the classroom and in the text-books that myopia is a refractive anomaly, and its importance as such is generally accepted, but the accumulated experience of years impresses me more and more with its importance, and I have come to regard the myopic eyeball with more or less skepticism. To make myself clear in this, I look upon astigmatism as a common finding. Hyperopia is to be anticipated, especially in the young, but I am never brought to the study of myopia in the young eye, without entertaining a fear or suspicion for the future of that eye, differing thus from my attitude toward other refractive conditions.

We have but to refer to our case records to realize this difference between myopia and other refractive conditions, and the ophthalmoscope will clearly show the physical changes which em-

phasize the dangers of myopia. The child of tender years, with but slight myopia, is returned to us a few months later, frequently on the advice of the teacher, and we are surprised at the increase in the amount of myopia as well as other symptoms so common in the developing myopic eye. The case, despite our best efforts, continues to develop until in the adolescent period, when the eyeball yields most readily to tension and compression, those distinctive changes become established within the eye, too familiar to every ophthalmologist. But myopia and its destructive processes do not cease at this period of life. Posterior staphyloma with choroidal and retinal disturbances inaugurated in the developmental period of the eye, places this eyeball in a defenseless attitude, whereby retinal detachment, vitreous degeneration, lenticular opacities, glaucoma and blindness, are too frequently the result; hence the loss of so many myopic eyes in middle life and later.

The picture above I have purposely exaggerated because I know that the myopic eye is not viewed with sufficient caution.

The cause or causes of myopia are important for us to consider. Etiologically, many theories have been advanced. The theory of Stilling would seem even today to be as practical, from a physical standpoint, as any since advanced. It is certain that the muscular attachment to the eyeball, especially of the superior oblique and recti muscles (Stilling) in their act of contraction, must exert an influence upon the antero-posterior axis of the eyeball which has already lost its resisting power from disease. We must always bear in mind also that myopia is a disease of childhood, attacking the eye in its period of greatest susceptibility, when factors insignificant at a later period of development are very potent in the child.

I have been for years greatly interested in the antecedent factor in myopia. I think that the medical mind, as it waxes richer in experience, comes to realize more and more the important role which heredity plays in all of our calculations. I have taken great interest, therefore, outside my personal experience, in reviewing the literature upon heredity in myopia. I find the work of Motais is perhaps the most comprehensive along this line of investigation, and his research has perhaps been more widely extended than any other authority. In looking over his

work upon this phase of myopia, I find that his investigation covers a period of ten years and is based upon the direct examination of entire families. All cases are eliminated where father, mother, brother, sisters and grand parents could not be examined directly. His studies cover the families of 224 boys and 106 girls. The total number of persons drawn into the investigation was 1,991. There are in his series 133 families with 224 myopic boys, and 83 families with 106 myopic girls, all with *antecedent myopia* and often multiple. We find in the boys 65 per cent. of hereditary and 35 per cent. acquired myopia. In the girls 78 per cent. of hereditary and 22 per cent. of acquired myopia, and as the author states, "these figures show a very strong probability in favor of the acceptance of hereditary influences in myopia." He states that these influences are characterized by the following manifestations:

1. "By the precocious or early appearance of myopia, and in this I might say that the average myopic child manifests activity in the progress of disease at nine years of age, while the acquired myopia manifests activity at twelve years of age.

2. "By its more rapid development. In this he states that at ten years of age the average degree of hereditary myopia of 1.5 D. has at fifteen years of age increased to 4.5 D., and at twenty years of age 6 D., while the acquired myopia of ten years of age of 1.5 D., at fifteen years has only increased to 1.75 D., and at twenty years to 2.5 D."

These figures would show that certainly in those cases in which he has shown an hereditary strain that the myopic condition has been more vicious in its manifestations. He further refers to its greater intensity, likewise to the frequency and gravity of the choroidal complications, which are a very important factor in my mind. For instance: "posterior staphyloma in hereditary myopia at ten years of age occurs in 20 per cent. of the cases, while in the acquired it is but 3 per cent. At fifteen years of age in hereditary myopia he finds 52 per cent., while in the acquired but 17 per cent. At twenty years of age in the hereditary type 88 per cent., while the acquired is but 36 per cent." Thus we can see a further accentuation of the ravages of those cases definitely shown to be hereditary in their character.

It would be of the greatest interest to follow out more fully Motais' deductions. The character of his investigation has been most complete,

and his deductions seem to be beyond question; but other authorities have done remarkable work along the same line.

For instance, Boch assumes the correctness of the Stilling theory of the etiology of myopia, and his deductions are most conclusive of the hereditary element; however, not so exhaustive as those of Motais.

Neul, Meyerhoff and Lehman have likewise added greatly to this interesting phase of myopia, and it might be at this time of interest for you to know that hereditary myopia has been admitted by Cohn in 3 per cent. of his cases; by Loring 6 per cent. Rimpler gives 23 out of 41 private records; Durr admits 30 to 45 per cent.; Strauman claims 56 per cent.; Galezowski observed 4,654 cases and found 3,847 of hereditary origin.

The divergence of opinions evident from these figures is due to the difference in the manner of taking statistics and presenting the data. However, reference to these data cannot help but interest you. Relatively little has been done recently along this line of investigation, but the above data is sufficient to direct our attention to the important role which heredity plays in myopia.

I believe we may point to it as an etiological factor of infinitely greater import than any other one, and if the physician, the nurse, the parent and teacher would realize this, I believe it possible for some, at least, of the evil results of myopia to be avoided. If the family physician were to direct wisely the use of the eyes of a child known to have a myopic parent or parents; if the nurse would not permit the child to indulge in its playthings in dark places; if the myopic parent would not permit the child to attend school until later years, say ten years instead of six; much could be accomplished. When the child enters school the illumination should be selected wisely, its source and direction, also the distance from the eye the child's work should be held, and no undue stooping of head or acute bending of the neck (spine) should be permitted. If these simple things were recognized by physician, parent and teacher as antecedent factors, I know that the ravages of myopia might be very greatly reduced.

In a paper of this character much might be said regarding the physical changes taking place within the eye, its ability to endure the usual task imposed upon a developing eye known to be dis-

eased, the application of glasses, and so forth, all of which mean so much to the future of an eye thus affected. All these apply to the myopic eye in common. But I can only reiterate that a myopic eye of whatever origin should be treated as a diseased member and must not be lightly dismissed as a refractive disorder to be cured simply by prescribing glasses.

DISCUSSION.

(Abstract)

DR. MICHAEL GOLDENBURG (Chicago): Thought the subject was timely, in fact, such a familiar subject that we sometimes do not pay enough attention to the details. While agreeing on the subject of heredity, he had not realized that it was quite so important a factor. The outline suggested by the essayist as to the care is very excellent but very difficult to institute. He is convinced that myopia is more than a refractive error, that there is unquestionably a lowered resistance or a lack of resistance of the sclera. He rated the relation of myopia to the different stages of life and wondered whether the control of these different stages of life by the glands of internal secretion has any influence upon the progress of myopia. He questioned the theory that the recti muscles are the most important factors in the development of myopia, feeling that if the sclera was resistant, the recti muscles would not have the effect that is claimed for them. He is more inclined to favor the intra-ocular tension in the presence of a less resistant sclera.

He suggested in a case of known progressive myopia making a communication between the anterior chamber of the eyeball and the subconjunctival space, the same as in iridodesis—the cyclodialysis operation for glaucoma.

DR. OLIVER TYDINGS (Chicago): The theory of using in those cases which are progressive, cycloplegics, and in addition to that, iridectomy to try to control the intra-ocular tension or pressure.

DR. GEORGE SUNKER (Chicago): Noted that myopia is a disease of civilization, very little occurring among illiterate people, very little among the negroes, none in the true negro. He believes the development of myopia, as life progresses in the various stages of youth and adolescence and in the adult, is largely dependent upon the internal secretions, the recti muscles cannot produce vitreous hemorrhages or a marked posterior staphyloma. Mechanical conditions of such a type cannot produce inflammatory actions.

He believes in the full correction of myopia with hygienic treatment, physiologically and anatomically and otherwise, and would hold the parents, to a large extent, responsible for the progressive condition of the myopia they have in children. It is our duty that we should enlighten the public and insist upon the careful examination—not the routine, careless examination that is now done in schools, but a scientific, accurate examination of all eyes and then prescribe accordingly.

DR. CLARK W. HAWLEY (Chicago): Reported a

case of hereditary myopia in his own family. A brother-in-law with a myopia of minus 4 which was not corrected until he was about eighteen years old. It has gone on to progressive myopia until now, as a man perhaps forty years old, he is totally blind. Some six or seven years ago, he was married. He has a little boy now absolutely as bad off as the father was at thirty-five. He was born almost blind, with a high degree of myopia and a high degree of myopic astigmatism. He lives in the West and unfortunately the father and mother are Christian Scientists and would have nothing done, but when he visited them some two years ago, they allowed him to refract the boy, who has a high degree of congenital myopia with vision very much reduced and the probabilities are that before the child is twenty years old he will be totally blind.

In another case of progressive myopia that started with a slight degree of hypermetropic astigmatism in a boy about twelve years old, he did not allow the patient in passing through the rest of his grade school and high school to read any whatever. His mother read all of his lessons to him while he was in high school and he read nothing in school whatever. The boy stopped at minus 4 and he has remained now for a number of years at minus 4. If we can stop the use of the eyes, we can progress in the treatment.

DR. BROWN (Closing the discussion): The point raised by Dr. Goldenburg is one of the most interesting features of myopia to me. There are three crucial periods in the life of every myopic individual. crucial periods in the life of every myopic eye—the ages of twelve, twenty and forty approximately, and I believe that the internal secretion of the body have much to do with changes in the eye-ball so frequently seen in the myopic.

I can't get away from it, and I suppose the same applies to you—the ages of twelve, twenty and forty. I do believe that it is due to the alteration in volume and character of the internal secretion of the body.

MANIFESTATIONS OF SYPHILIS IN THE NOSE AND THROAT*

ARTHUR H. GEIGER, M. D.

CHICAGO

The frequency with which cases are appearing in clinic and in private practice with various luetic lesions induced me to bring up this subject. Most of the cases examined had not been diagnosed as luetic, that is, the nose or throat condition was not thought luetic. Nearly all the cases had been treated for longer or shorter periods only locally, not having received injections or medicines for syphilis. Inquiring into this carefully, I found that in most instances the patients had not been asked about a syphilitic infection.

In our nose and throat clinic we are on the lookout for syphilis if a sore throat has been going on over several weeks. Owing to the peculiar and many times obscure places the disease picks out in the nose and throat, it is very essential to examine a patient with good illumination. The cases observed had either patches, small ulcers, gummas and a few with moderately advanced destruction of bone. Former years, when a diagnosis was never certain until secondaries appeared, can only be remembered with regret. Patches and sores around the mouth and throat are contagious. It is not wise to lull ones self into fancied security by the idea of the non-active character of these lesions, for spirochætae can be demonstrated in smears from them. In a very excellent paper some years ago Wile found in a series of cases that the time from the initial lesion to the tertiary varied a great deal. He found the average to be ten years. The records of the cases I have studied, show the average to be seven years.

The fact that the late manifestations occur notwithstanding our modern therapy cannot to my notion be called an indictment against the arsenical treatment. Other points must be considered, such as the patient's unfaithfulness in carrying on with the treatment. For convenience sake we have been dividing syphilis into primary, secondary, tertiary and congenital. Hard and fast rules cannot be laid down as to the time of appearance of symptoms after the initial lesion. It has been shown that we may see primary, secondary and tertiary lesions at one and the same time. It might be best to say that when a primary or secondary becomes destructive and breaks down tissue, it is tertiary.

The cases cited I hope will illustrate the seeming difficulty of diagnosis of nose and throat syphilis and are not cited as being very unusual.

Case with primary sore on the septum. It was considered primary, after going into the history carefully and knowing the veracity of the patient to be beyond question. This sore, nearly at the perpendicular plate edge, therefore high up and back, broke through and destroyed some of the septum. Owing to inefficient general treatment, a nerve lesion developed in two years' time with hemiplegia. Primaries of the nose are rare, and are as a rule caused by picking the nose with an infected finger. The pharynx probably shows initial lesions frequently. The lips are of course

*Read at meeting of the North Side Branch, Chicago Medical Society.

the commonest site of initial lesion. A few primaries of the tonsil, palate and pillars are among my cases.

A case of primary lesion on the tonsil may be of interest. A young married woman having pain on deglutition, and believing she was developing a sore throat, went to a physician. After an examination he prescribed a gargle. Condition not showing improvement after five or six days, returned to physician and he swabbed out throat. As she did not improve, she consulted another physician and practically the same procedure was followed. This case showed a one-sided inflammation of the throat. The tonsil and pillars of the right side looked red and swollen. The glands on that side were enlarged. One of the crypts whose opening was larger than the others was covered with grayish mucus. Wiping this away, a sharply defined ulcer was shown. Here was the luetic sore in plain view. Wassermann 2+. Case cleared up nicely with the arsenical treatment. The only other condition that might resemble the lesion in this case is Vincent's angina. There was a belief that the Wassermann is positive in Vincent's. Taylor of London in a series of fifty-five cases found the Wassermann positive in only two cases. In these it was positive not because of Vincent's spirillum, but because there was an associated lues.

The secondaries appear in the nose or throat in the form of erythema or mucous patches. Patches are rather common but sometimes hard to see. Being superficial ulcerations, they are often overlooked. The area of hyperemia which surrounds them should call attention to their character. They may occur on the vocal cords, epiglottis or arytenoids. Several cases in this group had patches which were hardly apparent unless the pillars were retracted. If a case has a persistent rhinitis after other things, such as polyps and septal deformities, have been shut out, think of syphilis. Should the patient also have a continuous burning sensation in the nose and perhaps nocturnal headaches, inquire carefully for previous luetic infection.

A case in illustration was sent in for septum operation. There was a marked obstruction to breathing. In probing, the redness and swelling of the membrane made me think there was more than a mere deflection. Examination of the mouth showed a pin-head size hole in the hard palate. History and Wassermann confirmed a

diagnosis of lues. It was possible to run a fine probe up through and under the floor of the nose on the side of the obstruction.

The gumma itself, strange to say, is sometimes overlooked. In the nose they are found in the septal tissues on the bony framework or on the alae. In some cases the gumma breaks down rapidly, and in others remains about the same for some time. I have seen gummas of the hard palate and tongue, but only a few. In the cases studied, there were gummas of the larynx, pillars and one of the tonsils.

In one case, a man who had been treated for some time under the impression that his tonsils were at fault, an ovoid tumor about the size of a hickory nut was found. The swelling came from the right laryngeal wall and lay over the right cord only the left cord being visible. Local treatment, direct applications, caused deep ulcers to form and necrosis with expectoration of tissue. The difficulty in breathing was relieved, and after some weeks of anti-syphilitic treatment the swelling was reduced to one-third its former size. In this case, though there was the chronicity, the hoarse and aphonic voice, the difficulty at times in deglutition, the larynx was not examined and syphilis evidently not thought of by previous consultants. The symptoms in gumma of the larynx may become severe due to edema and make it necessary to scarify or do a tracheotomy. A case in point was a woman who had a marked dyspnea. On examination, a large mass was seen, leaving only a small chink to breathe through. Owing to the urgency of symptoms, hospital care was advised. Scarification was done with some relief. The next morning she was breathing easy and said that during the night she had coughed up a large piece of tissue. Laryngeal examination now revealed an ulcerating gumma. Thorough anti-syphilitic treatment improved the condition so that now only an irregularity of the contour of the wall of larynx is to be seen, with no ulceration. The voice is good.

The tertiary lesions causing various forms of paralysis of the cords must be thought of. Usually there is no local sore or gumma. The trouble is caused most often by a gumma affecting the nuclei or origin of the vagus in the medulla or in the nerve itself at some point in its course.

A consideration of the deformities resulting from tertiaries about the nose and throat merit

a separate paper. They are very apparent and easily recognized.

In the congenital form of lues, the child has nasal discharge disagreeably persistent, snuffles, snoring and mouth breathing. If the lesion is in the larynx, the symptoms are bleating or voiceless crying. Dyspnea, sometimes amounting to laryngismus stridulus, is often present. If we have Hutchinson's triad: keratitis, peg teeth with notches, fissures and stellate scars about the mouth, we may be sure of the diagnosis. A child with all these symptoms was sent to me for adenoid operation. This boy presented an almost classical picture of Mongolian idiocy. He had a plus Wassermann and was put on anti-syphilitic treatment with splendid results.

There is no doubt that manyluet children are operated upon for adenoids with harmful results because at the time the underlying disease was not recognized. It has been my custom to have a Wassermann made or examine for syphilitic bone lesions before operating. Of course, if they have Hutchinson symptoms enumerated above, they are not operated upon but treated systemically. Dr. Borden of Boston some years ago brought out the danger of operating on cases of so-called latent syphilis. Such an operation would act like a provocative salvarsan test and might cause great damage. It would seem to me that if a severe reaction occurs or healing does not proceed normally in such a case, tests could be made and anti-syphilitic treatment started before too much damage had been done.

Attention has been directed to syphilis of the accessory sinuses recently. I have not seen any in clinic or private practice. It seems that in such cases lues occurs as a bone necrosis involving the ethmoidal and frontal cells. Gummata originate in the bone and not in the mucosa in syphilis of the sinuses.

Conclusions might be summed up as follows:

Snap-shot diagnosis in throat trouble is wrong and syphilis should be considered before treatment is advised.

Noses and throats should be examined with the best of light by general practitioners. Specialists usually use good illumination.

Careful questioning as toluet infection should be the rule in chronic nose and throat affections, especially if contemplating operation.

Proper anti-syphilitic treatment has shown

good results on the lesions of nose and throat syphilis.

SYPHILIS IN HEART LESIONS*

WILLARD W. DICKER, M. D.

Assistant Professor of Medicine at Rush Medical College,
Member of Attending Staff in Medicine, Cook
County Hospital,
CHICAGO

We have now reached a point in the study of heart lesions when it is no longer sufficient to make a diagnosis of mitral regurgitation or aortic regurgitation without including in the diagnosis the cause of the lesion. The pathological basis for the condition is of the greatest importance in the prognosis and treatment and without considering it we are apt to make a great mistake in handling the case.

A few years ago Cabot published an article classifying heart lesions occurring in the Massachusetts General Hospital into four groups depending on their etiology. These classes were as follows:

1. *The Rheumatic Heart*, in which he includes the valvular lesions of all forms of streptococcus infections such as occur in rheumatism, tonsillitis, scarlet fever, etc. The characteristics of this group are the occurrence usually in young people following one of the infections mentioned and the valves of the heart show the result of an acute inflammation.

2. *The Renal Heart*, in which group he includes the hypertrophied heart, which we find in nephritis.

3. *The Arteriosclerotic Heart*. This occurs usually in older people and the heart shows lesions of arteriosclerosis and fibrosis. Many of these hearts show a mitral regurgitation but at autopsy the mitral valve does not show any signs of inflammation, the regurgitation being due to a widening of the mitral ring. A very large number of cases of mitral regurgitation coming on late in life are due to this cause. Christian, in a recent article, points out that it is very rare to find at autopsy an inflammatory lesion of the valve in cases of mitral regurgitation coming on past middle life, unless it is preceded by a definite inflammatory rheumatism.

4. *The Syphilitic Heart*. This is the group which I am going to take up in detail.

It has been shown by many pathologists that

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syphilis picks out the heart and aorta in many cases and it is interesting to see their figures. Warthin, for instance, who has made a very careful search for syphilis in all the autopsies at the University of Michigan Hospital has found evidence of latent syphilis in one-third of all the adult cases. The diagnosis has been made positive by finding the spirochaeta pallida in most of these positive cases. The total number of these positive cases was 41 and in 36 of these he found active syphilis of the heart and 32 showed active syphilis of the aorta. These figures lead him to some very startling conclusions. He believes syphilis is the chief factor in the production of myocardial insufficiency. He also makes the following statement: "My pathological experience makes me believe that the heart and aorta are involved in every case of latent syphilis."

Allbutt in his wonderful book on Diseases of the Blood Vessels makes some equally surprising statements. He quotes Deneke, who says "that the death rate of the syphilized is 68 per cent above the normal level of insurance computation." He also quotes from the statistics of the Hamberg Hospital, which shows that of 83 deaths from syphilis, 54 were due to aortitis.

During the last year, I have made careful inquiry into the etiology of the decompensated hearts that have entered my service at the Cook County Hospital and have here listed those who entered during about five months of that time.

There were 44 cases in all and of these 17 or 38 per cent. proved to be syphilitic in origin, 10 or 24 per cent. were rheumatic, 7 or 15 per cent. were arteriosclerotic, 8 or 18 per cent. were renal and 2 cases or 4 per cent. were fatty hearts.

Now the source of these figures must be considered before drawing any conclusions. They were all male patients entering the County Hospital with decompensated hearts. I do not mean to draw the conclusion that 38 per cent of all lesions of the heart are syphilitic and that rheumatism only accounts for 23 per cent. Of course if these figures included women the rheumatic percentage would be much higher. My figures simply lead to the conclusion that if syphilis accounts for so many cases in the County Hospital, it must also account for many seen in private practice. Its importance cer-

tainly justifies a careful consideration of the nature of the syphilitic involvement.

The most apparent lesion is in the aorta. Here we find small areas of inflammation developing in the middle coat and later extending into the inner coat. This produces a weakening of the aortic wall with a dilatation resulting. The aortic valves are later involved, giving an aortic regurgitation and subsequently the disease extends into the orifices of the coronary arteries which are close to the valves. When these two lesions are present the heart is badly crippled.

There is also, in a large proportion of cases, an involvement of the myocardium which accounts for the failure of the heart to respond to treatment. From the nature of the process we readily see that if we are going to accomplish anything in the treatment, we must make our diagnosis before the aortic valves, coronary arteries and myocardium are involved.

The symptoms of an early aortitis are as a rule somewhat indefinite and it is not very common to be able to make the diagnosis before irreparable damage is done; but in some cases we can, and, in these the progress may be stopped by active syphilitic treatment.

The earliest symptom in many cases is pain. This may vary from a transient sense of tightness or oppression about the upper sternum to the utter torture of true angina. The patients that have pain early are easily diagnosed, but many do not show this pain until rather late. The other symptoms are even more indefinite. Included are such vague complaints as general debility, dyspnea, hoarseness, cough and slight cyanosis.

Physical examination before the valves are affected gives only a slight increase in the aortic dullness and this is usually hard to make out. A clanging second aortic sound is described by some. Later on, of course, we get an aortic regurgitation and signs of aneurysm which makes the diagnosis as easy as it is of no avail as far as treatment is concerned.

The x-ray gives us the most valuable information for here we can detect very slight dilations. And of equal importance is a positive Wassermann reaction. A negative Wassermann does not rule it out as was shown in one of my cases. Here there was a typical syphilitic

aortitis clinically with a negative Wassermann but the autopsy showed a syphilitic aortitis. A spinal fluid Wassermann might have been positive in this case and should have been done. On the other hand we cannot say that a positive Wassermann makes the diagnosis but the absence of any other syphilitic lesions and knowledge of the frequency of the involvement of the heart and aorta of latent syphilis would make one strongly suspect an aortitis if there were any symptoms or physical signs pointing to it.

Another point in the diagnosis is the therapeutic test and this will often give positive evidence as was illustrated by one case of mine. A man with a history of syphilis and a positive Wassermann had pain in the sternum with no other findings on x-ray or physical examination. This promptly cleared up under mercury, although it had been present for many months and resisted other treatment.

The prognosis in the case of the syphilitic heart is much worse than in the rheumatic, when they become decompensated; very few of them ever being able to do much after they have once broken down. This, as I have mentioned, is easily explained by the pathology, as the coronary arteries and myocardium are so often involved.

The study of the effect of syphilis on the heart must lead us to the conclusion that the heart of every so-called cured syphilitic should be very carefully watched throughout his life and any abnormality should call for active treatment.

REFERENCES

- R. C. Cabot.—Four Common Types of Heart Disease.—*J. A. M. A.*, Vol. 63, No. 17, Oct. 24, 1914.
- Henry A. Christian.—Chronic Myocarditis.—*J. A. M. A.*, Vol. 70, No. 25, June 22, 1918.
- A. S. Warthin.—Persistence of Active Lesions and Spirochetes in the Tissues of Clinically Inactive or "Cured" Syphilis.—*Amer. Jour. Med. Sc.*, Vol. 152, Page 508, Oct., 1916.
- Sir Clifford Allbutt.—Diseases of Blood Vessels, Including Angina Pectoris.
- G. E. Brown.—Syphilitic Aortitis, Its Early Recognition.—*Amer. Jour. Med. Sc.*, Vol. 157, No. 1, Jan., 1919.

"My dear sir," said the physician slowly, "I have been attending you for nine weeks and have done my best, but I'm afraid that your end is near. Have you any last wish to express?"

"Yes, doctor," he replied in a faint voice, "I wish I had had another doctor."

HYPERTROPHIED ANAL PAPILLAE (PAPILLITIS)*

CHARLES J. DRUECK, M. D.

Associate Professor of Rectal Diseases Post Graduate Medical School and Hospital, Rectal Surgeon to Peoples Hospital

CHICAGO

The transition from mucous membrane lining the intestinal canal to the external skin at the anus is accomplished in three distinct steps each forming a distinct zone. In the intermediate zone the epithelium changes to several layers of polygonal cells. Dermal papillae are found here. The submucous layer is very vascular and contains a ganglionated plexus together with lamellæ corpuscles. The muscular coat terminates in slender bundles in the rectal columns forming the internal dilator muscle of the anus, while the circular layer of the muscular coat becomes thickened into the internal anal sphincter. This internal anal sphincter is of smooth muscle fibers. Below this muscle is the external anal sphincter which is composed of striated muscle. (Lewis and Stohr: Textbook of Histology.)

On the borders of the anal valves are tubercles or papillae of highly sensitized tissue. These papillae are always present although normally of small size. One or several of these papillae may however become hypertrophied and may attain the size of a rice grain. I have seen one as large as a navy bean which was mistaken for an anal polypus. Three tumors may be seen by everting the anus or through an anoscope. The pyramidal teats have a pinkish colored base continuous with the mucous membrane below it but have a pearl white tip. Digitally they may be appreciated as hard nodules about the anus, although a digital or specular examination is very painful. The histology of these anal papillae is very interesting. The deeper portion is composed of erectile tissue similar to the corpora cavernosa of the penis. In this tissue are numerous thin walled venous spaces with but slender trabeculae of tissue between them. The veins of this structure have such thick walls as to closely resemble arteries.

The nerve supply of these papillae is from the pudendal and the inferior hemorrhoid. Sensory filaments terminate in tactile corpuscles in the superficial or external mucous membrane structures and in lamellar corpuscles in the cavernous tissue.

*Read before the Chicago Medical Society.

Symptoms: These little papillae are stimulated by each passage of the fecal bolus and if diseased this irritation may be very painful and otherwise disturbing to the sufferer. At each distention of the anal canal by the feces these little papillae engorge and become painful; there is a feeling of fulness or tickling within the anal canal, a sensation of incompleteness of evacuation, or as though worms were being voided or were crawling on the skin about the anus. There is also a consciousness that the anal sphincter is unduly contracted. This seance recurs with each defecation and it may be several minutes or perhaps an hour until by sphincteric compression and the retraction of the mucosa, the papillae are depleted and assume their former size and position and the distressing symptoms subside. As the papillae become hypertrophied and are continuously enlarged the symptoms are more likely to be constantly present. In some instances the anal sphincter is so spasmodically contracted as to prevent a complete evacuation and the lower rectum remains filled with feces. An enema given at this time will empty the bowel but its administration is painful and therefore objectionable to the patient.

Although the symptoms of papillitis are quite constant this condition is frequently overlooked and treatment instituted for pinworms, hemorrhoids or pruritis or perhaps the feces are examined for some irritating factor. Such treatment of course fails to relieve and the patient is then dismissed as a neurotic when his trouble is all local and really very amenable to treatment. If untreated these papillae may become definite polypoid tumors or the venous congestion be the forerunner of hemorrhoids.

Treatment: All of this troublesome chain of symptoms will be relieved magically by amputation of the papillae which is very satisfactorily accomplished under local anesthesia. The width of the anesthetized field may be modified according to the extensiveness of the disease in the case on hand. (My technic of regional anesthesia I have described elsewhere.) When but a few individual papillae are to be removed the infiltration may be confined to the diseased masses. The needle is inserted into the mucous membrane at the base of the tumor and gradually advanced toward the apex injecting as we proceed. Ten drops of anesthetic solution to each

papillae is usually enough. When a number of papillae are enlarged and the sphincter is hypersensitive it is better to anesthetize the whole anal ring and the sphincter muscle.

Having anesthetized the papilla so that it may be manipulated without causing pain it is drawn out with tissue forceps and cut off well below its base. The wound is not sutured. Local asepsis (careful cleansing after each defecation and a warm sitz bath each day) is all the after treatment required. When the patient is discharged he is instructed to continue the ablutions.

Case 37 says that for two and a half years she has had pain, itching and a creeping sensation at the anus, is constipated and feels as though evacuation is incomplete. Anus feels sore. On examination there were found five hypertrophied anal papillae and one hemorrhoid on the right posterior quadrant of the anus. These were all removed under local anesthesia. Three weeks later patient reports that she "Enjoys the comfort of going to stool and getting results she has not had for years."

30 North Michigan Avenue.

A MEDICAL OFFICER'S DUTIES IN AN ARMY CANTONMENT*

EUGENE THOMPSON, M. D.,
EAST ST. LOUIS, ILL.

I have prepared this paper with a feeling of diffidence. I know you are all wide-awake men, keeping yourselves carefully informed of what is going on in the world, not in the least neglecting matters pertaining to our profession. For this reason I fear I am going to tell you something you are already familiar with—in the abstract at least—the life of the doctor in the army camp. My life as a doctor in such a camp covered a period of only six months but it was six months full of an experience I had never before had, experience that gave me a better insight into human nature. True, I saw this nature at its best. I saw it when fired with patriotism, when considerations of self sank into insignificance, and zeal for our country and our country's welfare was the only consideration. But why speak of this? All know the unanimity of sentiment that fills the breasts of true Americans—a sentiment that will drive Wilhelm

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Hohenzollern from his egotistical, tyrannical and blood-stained throne, and which will give the German nation what it now does not appear to want—a government by its people. The physician in private practice sees human nature not at its best. We see the sick body and we also see a sick disposition, and those of us who are most successful in dispelling the gloom of the patient and his friends, are the most successful in practice.

In an army cantonment, as I have before stated, we see this nature at its best and brightest time—every one, private and officers, full of enthusiasm; the latter kind, yet firm in discipline; and the former willing, alert and obedient, knowing full well that an army cannot be a success unless they obey all rules and submit cheerfully to the strictest discipline.

Camp Dodge, Iowa, is located twelve miles from Des Moines, the capital of the state. It is an ideal place for an army cantonment. The streets are laid out with the regularity of those of a city and all the modern conveniences are supplied. The buildings consist of the barracks where the soldiers are quartered, and the infirmaries where sick call is held and where the medical department is quartered, and where also are a few beds for the accommodation of patients before they are sent to the base hospital. In addition to these are the officers' quarters, latrines, and base hospital.

This latter is an immense structure, covering with its courts and yards 35 acres, and able to accommodate 2,000 patients. It is unnecessary for me to say that this hospital is supplied with all modern appliances, managed by the best surgeons, with a full corps of competent nurses.

I wish to say that when I was discharged from army service nearly six months ago the surgical head of the base hospital was Major T. C. Witherspoon, a former St. Louis surgeon, and doubtless known to many of you. I had nothing to do at this hospital except to attend the weekly lectures given there by some members of the profession on medical topics. I was one of three surgeons attached to a regiment—the 313th Engineers—and, of course, held forth at their infirmary. Each regiment has its own infirmary, and the size of it, and the number of surgeons allotted to it, depends upon the size of the regiment. Ours, when full, contained 1,600 men,

whose health we three surgeons looked after. This was a comparatively easy task, for the men, as you know, were all young and very few were afflicted with diseases of a chronic nature. Every morning we had our sick call, usually from 7 to 8. Two rooms were used for this purpose—a waiting room and a consultation room. In the latter the three surgeons would take their stand, and matters were so arranged that our assistants would send patients to each of us as we had time to care for them. No seats or chairs were used except when patient was too sick to stand or when it was necessary to examine a foot or leg.

We would question the patient, get a general idea of what ailed him, step to that part of the room where the drugs were kept, and in a little paper box would put what pills or tablets we thought he needed. We would stitch up wounds, and put splints on broken bones, but when it was apparent a patient was going to be sick any length of time, he was sent to base hospital. Cases about which we entertained some doubt were kept in the infirmary until we could decide the real nature of the trouble. Occasionally it would happen that a soldier would be too sick to attend sick call, then one of us would visit him at the barracks, and if he was found to be very ill he would be sent from there to the base hospital. Occasionally we would run across a case of nostalgia, but not often. The boys were too much in earnest to permit a little case of home-sickness to get the better of them. A few came in with pro-german tendencies but these were soon found out and appropriate remedies applied. Our malingerers were usually of this type and at times some of them could feign illness so well that for a little time we would be in doubt about them. Such were put to bed, not allowed to get up or walk about, kept on a light diet, with the result that they would soon tire of such treatment and show a willingness to return to duty.

Our sick call became heavier every time a new contingent was added to our regiment. Frequently, for some reason, soldiers would be sent away to other camps, some from each regiment. So many were taken from us at one time, about February 1, we were down to 600 men. When the new contingent came in on February 15, we were allotted enough to fill up our quota, 900.

These, of course, had to be examined by us which for three days gave us plenty to do. There is nothing exactly hard or difficult about making these examinations after the work has been systematized.

Early in the fall, owing to the newness of the work, it rather stuck to our fingers, but after a system was evolved we found we could do the work thoroughly and with dispatch. As a rule the eyes would be tested first. One of the enlisted men of the medical department was taught to do that. Enlisted men were also taught to test the hearing and to take the finger prints.

Before examination began the recruit was stripped. After eye sight and hearing were tested, one of the surgeons examined the nose and throat. The recruit was passed on to next surgeon, who examined the extremities, noted the condition of the feet, toes, hands and fingers, and also looked the body over for deformities, abnormalities and scars, also examined for hernia, undescended testicle and for piles. This done the recruit passed on to the last surgeon, who examined the chest. Of course records had to be kept. The recruit brought with him his card, or, if he did not bring it, it was sent us by his local examining-board, giving us the result of that examination, and this, of course, served somewhat as a guide for us. We had to fill out for each one a form 88 which served as a permanent record, and which was sent to our Division Surgeon, who in turn forwarded it, after a certain time, to the authorities at Washington. I should mention also that to each regiment are attached dentists; we had two, who examined the teeth and did what dental work was found necessary.

Before proceeding further I must speak of another duty that devolves on the army doctor. Our camp had one general inspector, Major Fronk. It was one of his duties (I speak here in the past tense for the Division at Camp Dodge, the 88th, has gone to France and it is possible some other system is in vogue there now), to see that the medical staff of each regiment carefully looks after its sanitary condition. He would accompany one of us on our round of inspection, which consisted in going through the mess halls and kitchens to see that these places were properly screened and dusted, to see that the ice box was kept clean and free from odor,

to see that no decaying fruit or vegetables were allowed to accumulate in the store room, and also see that the latter was kept clear of dust and flies. Of course the cooks and kitchen police came in for their share of inspection, and they were specially cautioned to keep their garbage can screened and their clothing and aprons clean and tidy. Even the hands, fingers and finger nails were not to be overlooked by the medical inspector.

The canteen, or exchange, where the soldiers bought their soft drinks, toilet articles, clothing, lunch, smokes, etc., was also visited by us, and like the rest of the places was expected to be kept in prime condition. The barber shop also came in for its share of attention.

The general inspector would drop in at unexpected times to see that we were faithfully performing our duties. These inspections were made twice daily and in our regiment this duty happened to devolve on me. I had seven mess halls and kitchens, seven latrines, the exchange, the barber shop and officers' mess hall and kitchen to inspect, which took from one to one and a half hours each time. We medical officers were not allowed to give orders—merely make suggestions.

If anything was found wrong anywhere we were expected to call the attention of the commanding officer of the company to it and he would see that the defect was corrected. Usually one notification was sufficient, and it is highly commendable that the officers were quick to act on the suggestion of the medical inspector. I should not close this paper without mentioning how we handled venereal diseases. As might be expected quite a number of recruits came in afflicted with such diseases. Such were given certain seats in the latrine to use and they were also put on treatment.

The gonorrheal patients were given injections twice daily at the infirmary. No particular drug was insisted on being used, but generally some of the silver salts were employed. No drug was given by the mouth for this disease. In the case of syphilis treatment was also given at the infirmary and mercury by the hypodermic method was used. If any of the soldiers had intercourse when on leave of absence, they were required, upon their return to camp, to come to the infirmary for prophylactic treatment, which,

of course, was some kind of an injection. To make the matter of prophylactic treatment yet more effective, such a station was established in Des Moines to which place the soldier must repair immediately after intercourse, for his treatment. Should a venereal disease develop after he had complied with this rule he was treated and no punishment was inflicted on him. However, if he failed to avail himself of this prophylactic treatment and the disease developed, he was punished. Said punishment was probably a fine of a month or two months' pay and withdrawal of permission to leave camp for a long time.

It is not for me to say whether the prophylactic treatment warded off cases of gonorrhea, but one fact is very suggestive. Very few cases of venereal diseases developed after the soldiers came to camp. About every ten days a venereal inspection of the entire regiment was ordered and the three surgeons would go to the different barracks, have the boys pass by with organs exposed, and a hurried but fairly efficient examination was made. In this way we were able to keep good track of these diseases. It was remarkably seldom that any newly-contracted disease was discovered. Whether this was due to the fact of the prophylaxis, or whether knowledge of the fact that at some unexpected time soldiers would be subject to examination, acted as a deterrent, I am unable to say. It is my private judgment, however, that it was the latter reason which accounted for the almost complete eradication of venereal diseases in our regiment.

In regard to the medical department, the surgeons and dentists do not compose this department in its entirety, but in addition there are a number of enlisted men who by reason of special qualifications are attached to this department. For instance, a druggist is found among the enlisted men. He is taken and given in charge of the drugs. Some one may be found who has had some experience in nursing or has worked around a hospital. Such is also appropriated to our use. Then, of course, we have to be filled up with others who, while they may never have had any experience along medical lines, yet because of special intelligence are entitled to a position with us.

Besides the medical officers and dentists, we had eighteen of these men. Their duties were

diversified. One or two had to handle the typewriter, others did police work. By this we mean keeping the infirmary in order, attending to the furnace, helping out at sick call, running errands and the like. But one very important piece of work these men are to perform is to carry litters on the field, and one of the important duties of the medical officers was to give these men daily instructions in litter bearing. One of our medical officers had seen service on the Mexican Border and was quite efficient along practical lines, and to him was given the task of instructing our men in the use of the litters. We were also expected to teach men the rudiments of physiology and anatomy; show them how to control hemorrhage; accustom them to the use of antiseptics; how to apply splints; render first aid and the like.

The duties of the medical department at the front will be most important and exacting, and these non-commissioned men attached to it are the ones who will carry the wounded from the field to the first aid dressing station.

It is necessary that they be in the best of health, courageous and strong. No less necessary will it be for the surgeons to be likewise strong, manly and possessed of great endurance. For this reason the War Department expects or demands that surgeons who are attached to the regiments in the field be young enough to undergo excessive physical strain and loss of sleep. Hence gray heads on the firing line cannot be used. The only place for a physician past 45 is in a base hospital and here he is required to be a specialist of one kind or another. It is virtually impossible for a general practitioner of past middle age to become an intern in a hospital. The only place for one of these is on, or near, the firing line, and as I've already stated he must be at an age when he can endure excessive hardships without himself breaking down and becoming a burden.

BACTERIURIA (Continued)

LOUIS E. SCHMIDT, M. D.,
CHICAGO.

With the carrying out of the technical details as just described, it stands to reason that the urines thus obtained ought to be free from contamination. The laboratory reports in our regular routine work frequently suggest that

the findings show or at least contamination is suspected. Naturally these cases must be re-examined in order to determine their accuracy.

It has been my custom to insist that all specimens of urine which are to be examined bacteriologically are sent after collection to the laboratory as quickly as possible. I am under the impression when thus examined a more correct version can be obtained than if this rule is not followed. If specimens are allowed to stand at room temperature for some hours, bacteria are known to multiply with such rapidity that qualitative results may be accurate but that the quantitative results must necessarily be erroneous and wrong conclusions deducted. Furthermore if contamination has taken place, if specimen is not immediately examined, the contaminating growth may have sufficient time to develop and overwhelm the real picture. In order to eliminate to a certain extent this error, the specimen if not immediately examined should at least be put into the ice chest, the mouth of the container to be protected. This avoids ammoniacal decomposition of the urine and permits of bacteriological examination.

The macroscopic appearance of a urine never permits of an accurate opinion, for instance, the urine may be clear and yet contain many bacteria. The hanging drop in pronounced cases gives information regarding the number, form and motility of the bacteria. The stained specimen of the sediment is always to be examined. Here I wish to state that errors are frequently made as the bacteria do not adhere readily to the cover glass if the urine is free from albumin because in the course of staining the bacteria are easily washed off. It is advisable in these cases before the drop is placed on the glass to first add a little ascites or other sterile albumin fluid to the glass in order to give the bacteria an adherent media. In the routine staining the ordinary stains as well as the method of Gram is always used.

If the bacteria are plentiful no concentration or centrifugalization is required, simply a few loopfuls to each tube of the various kinds of culture media. The usual plating should always be carried out.

Bouillon inoculation should never be omitted. In those cases where the urine is clear and the bacteria not numerous, 5 to 10 c. c. of the urine

must always be centrifugalized and the sediment used for the inoculation of the tubes.

It is needless for me to go into all the bacteriological technic as work of this kind presupposes the necessary knowledge for successful investigation.

From the clinical point of view it is necessary to recall the fact that the source of the bacteria in the urine may be that the bacteria are taken from the blood stream through the kidney and gain entrance to the urine through this route. Therefore bacteriological work on the blood concomitant with that of the urine is often desirable.

Furthermore in diseases of the kidney, such as abscesses, tuberculosis and true involvement with the colon bacillus, naturally growths are obtained. In these cases the bacteria are "adherent," so to say, to some organic material and in these cases the sediment would show this. Concurrent bacteriuria could and often times does co-exist with positive disease of the kidney or other organs. I wish it distinctly understood and I hope in the discussion it will be so understood that this type of mixture of conditions nor the simple but true infections, for instance with the colon bacillus, is not under consideration in this paper. Naturally in order to elucidate, it will be necessary for me to group these various kinds of cases of bacteriuria.

1. Cases of bacteriuria without the presence of pus in the urine, with no evidence of inflammation in or out of the urinary tract.

2. Cases of bacteriuria with the presence of pus in the urine with evidence of (a) disease in the genito-urinary tract of the male or urinary tract of the female, (b) of disease outside of the genito-urinary tract of the male or urinary tract of the female.

It is desirable to give example of these different types, rather from a pathological classification, not from the clinical division as already shown.

Group 1. (a) Male, aged 42 years, refused by life insurance company. Examined June, 1903. No complaint of any kind, in fact does not know for what he was "turned down." General physical examination from every standpoint is and continues to remain negative. September, 1917. However, the urine passed shows the peculiar turbidity characteristic of bacteriuria. On several occasions during this time, the terminal urine was cloudier than the rest of the urine voided. Besides on massaging the prostate, fluid is always obtainable which is loaded with colon

bacilli. Absence of pus and other pathological elements.

Group 2. (a) X-11. Male, aged 27 years. December, 1917. Family history negative. Always considered well until 25 years old. Then without known cause, swelling of one testicle, not particularly painful, but quite sensitive. Abscess apparently formed in course of six months and fistula remained. Three months later opposite side took same course of swelling and breaking down. Rectal examination showed vesicles and prostate involved in an inflammatory mass, however, not at all sensitive. Urinary symptoms only frequency. Urine containing pus and blood and tubercle bacilli. Urine on filtration, typical appearance of bacteriuria. Cystoscopy, bladder contents diminished and bladder mucosa shows a few isolated inflammation areas in the trigone which appear superficial. Ureteral orifices normal. Ureteral catheterization easily carried out. Both urines .7 per cent urea, slightly turbid and culturally and microscopically only colon bacilli to be found. No pus present in urine from kidneys.

This case shows kidney bacteriuria with admixture of pus from lower urinary and genital tract.

Group 2. (b) Female, aged 37 years, married, mother of three children.

Occasional urinary symptoms, pains and frequency. At times urine loaded with debris. Gives history of having had chills, fever, at times of abdominal pains. Menstruation apparently normal. General physical examination negative, although had been advised by several surgeons to have right kidney removed. Cystoscopically, bladder mucosa practically normal in appearance. Both ureteral orifices apparently emitting clear urine, regularly and with force. Both ureters catheterized and urine clear macroscopically and free from pus microscopically and cultures always on repeated examination showed the colon bacillus. One centimeter from right ureteral orifice, a small teat like elevation and at times a worm like mass that would curl up and flow and settle to the bottom of the bladder, often times apparently ten or twelve centimeters long. It had consistency of tooth paste which is expressed from tube containers. The bladder urine showed pus and occasional red blood corpuscles.

Diagnosis, bacteriuria from higher urinary tract, admixture of pus from rupture of Fallopian tube empyema.

Some consideration as to the question of pathology should be given. There has been much said and written on this subject: as to whether or not healthy kidneys may or may not excrete bacteria; whether or not some inflammatory condition pre-existed and naturally caused definite changes to occur and these in turn to allow the excretion of bacteria. Again take long continued sicknesses, such as pulmonary tuberculosis, into consideration. Undoubtedly in many instances the bacillus tuberculosis is found in the urine,

without any other pathological findings, and at the postmortem table no macroscopic changes in the kidney; however, microscopically some changes of a light degree, not at all, however, sufficient to account for the excretion of the bacteria. In the acute infectious diseases the germs are found both in the blood and urine and after a normal course of any one of these, often times no changes in the kidney, blood nor urine are to be observed. However, the question arises, were there changes going on in the kidney at the time of the height of these infectious diseases which would permit of the passing through of the bacteria? Take true colon bacillus infections of the kidney into consideration. Here the usual findings of inflammation are to be found in the urine. Blood, pus, bacterial and other casts, epithelial cells, debris, and albumin and naturally the colon bacillus. After the subsidence and complete absence of evidence of inflammation in the urine the bacteria have been known to continue. Therefore it may not be out of place to believe that the changes thus produced in the kidneys permit of the excretion of the bacteria. Where focal infections, such as diseases of the tonsils, nose, throat, gums and teeth, etc., are playing such an important role, not overlooking all the focal diseases of the abdomen, which however may permit the bacteriuria, the organs being neighboring or the disease may extend by the lymphatics direct to the urinary organs, must be at the present state of our knowledge taken into consideration when trying to find out the reason of bacteria in the urine.

In the true cases of bacteriuria there is often times no history of any kind of previous disease of the urinary tract. From what has already been stated I am inclined to believe, however, that in all cases of bacteriuria, possibly except of the hematogenous and lymphogenous types, that pus is always present at the beginning of an attack, although I believe oft times only for a very short period and practically of a light character. That when the pathology is established between the focus and the urinary stream, the bacteria may continue to persist without the presence of pus; furthermore, I am of the opinion that there may be at any time during the course of the bacteriuria, a flare-up of inflammatory conditions and naturally with the presence of pus and blood in the urine at these times. For this reason bac-

teruria has often times been regarded as the connecting link between these extremes.

In the vast majority of cases of bacteriuria in my series of cases in the male the patient gives a history of one or more attacks of urethral infection with or without complications.

In many of these cases there is no pus in the urine, nor can any be obtained by expression of the adnexa as cited in one of the cases. Yet in numerous cases where diseases of the kidney, bladder and urethra were eliminated it has been possible for me to express excretions from the adnexa in such quantity that the fluid would flow into the bladder and then in obtaining the same with admixture of sterile water to be used and this in turn would have the typical appearance of a bacteriuria. In some instances I have found it possible to express either from the vesicles or prostate or both. At the same time only normal vesical or prostatic secretions without the presence of pus. In most instances, however, in addition to the bacteriuric condition, pus would also be found, mixed with the fluids thus obtained, showing that the chronic inflammatory conditions of the adnexa were still present. Again here, as in cases of the kidneys, the inflammatory conditions were undoubtedly the forerunners of the bacteriuric condition and at least in some cases concomitant.

I wish to add that in these cases I always examined the urine from the kidneys, and only in a few instances was I in a position to state that the bacteria had two points of entrance into the urinary stream.

It is always desirable to obtain a most accurate history, particularly in the obscure cases, to take into consideration particularly diseases of the abdomen, appendicitis, gall bladder diseases, enteroptosis, obstipation, etc., and operations which have been performed whether on these organs or on the pelvic organs of women. History of attacks of fissures of anus, fistula, hemorrhoids, of leucorrheal discharges or adnexa and womb troubles and naturally infection of the female urethra and glands. It is of course needless to state that a most thorough examination from head to foot, including all the parts mentioned, are essential in order to arrive at some definite conclusions.

Where definite information as far as signs in the urinary tract are concerned regarding the presence of active diseases of the urinary tract it

becomes necessary to find signs equally as positive if possible which are indicative of diseases outside of the genito-urinary tract in the male and the urinary tract of the female.

Ureteral catheterizations frequently have shown me that bacteria gain entrance only through *one kidney*, however, most often through both. In these cases abdominal diseases of one kind or another are often times demonstrable and in many cases have been operated upon, but I wish to say without any alleviation as regards the bacteriuria and the symptoms produced. I have particular reference to appendicitis and perityphlitis although in one instance a Meckel's Diverticulitis was found.

The anatomy of the lymphatics between those of the colon and kidneys has been thoroughly demonstrated, again the lymphatics of the bladder vesicles and prostate, going up along with the ureter and connecting with those of the pelvis of the kidneys. In several instances of chronic appendicitis I was able to demonstrate to my own satisfaction that bacteria gained entrance to the ureter, as urine from the pelvis on the corresponding side was sterile, but on part withdrawal of the ureteral catheter colon bacilli on repeated examinations were always found.

In many of the chronic cases of adnexa troubles in the male, the bacteriologic findings were from the kidneys, not from the bladder or adnexa, although these still showed signs of disease.

The same may be said of the tubal and uterine processes where they are easily demonstrable by examination and where the bacteriologic findings are from the kidneys and not from the bladder.

In many instances in women with urinary symptoms such as may be produced by bacteriuria a light degree of parametritis has frequently been observed. Of course the skeptical will ask if the parametritis is not the cause of the symptomatology. In some of these cases the cystoscopic findings are the most important, one and the same, no matter what organ or organs are involved provided the lymphatics lead to the bladder.

It is an edema, due to inflammatory condition outside of the bladder, and in these cases the edema is comparatively of a mild character and accurate cystoscopy must be employed or otherwise it is easily overlooked. It may be either around one or both ureteral orifices, or chiefly around the internal urethral orifice or involving

more or less of the trigone. In several instances peri and para cystitis was discoverable by this type of edema. It consists sometimes of only a few almost microscopic sized elevations of the mucous membrane, again numerous and larger in size. They are filled with clear fluid and are translucent; maybe isolated or conglomerate. In the pronounced cases these elevations appear like small grape-like masses, being made up of small and large vesicles. To me this condition is absolutely pathognomic of inflammatory conditions—being a manifestation of a lymphatic involvement, often times with the focus of involvement some distance away, or it may be by direct contact of the inflamed organ with the bladder wall.

DIAGNOSIS.

In the diagnosis the question arises of how and why do the bacteria gain entrance to the urinary stream?

It is a settled question that bacteria are not to be found in the kidney, ureter or bladder or in the urine as it leaves the kidneys and find lodgment in the bladder in normal, healthy individuals. It is well recognized that there is a flora in the male urethra in perfectly healthy individuals, but these bacteria when washed out whenever spontaneous urination takes place, does not constitute bacteriuria as it is recognized at the present time. It is true an inflammatory disease of the urethra may cause involvement of parts which in turn sooner or later may give rise to bacteriuria, as already pointed out.

In acute infectious diseases bacteria are eliminated after gaining entrance to the blood stream through the kidneys. This holds true as pointed out in some chronic bacterial diseases. In some instances after the disease has passed and the individual is regarded as practically well, he may continue to excrete bacteria for years, and these individuals are regarded as carriers. I did not take up the subject of the pathology as it would have been necessary to theorize, but sufficient to state that in this class of cases with the history of infection and the clinical course recognized, it is sufficient for our purposes to simply state that the bacteria gain entrance to the blood stream through one focus or another and are then eliminated through the kidneys.

This same procedure may account for bacteriuria when found concomitant with distinct

focal diseases such as tonsillitis, furunculosis or skin abscesses, sinus diseases or even appendicitis, and also inflammatory diseases adjacent to or even involving genito-urinary organs such as para or peri nephritis, and in women inflammatory diseases of their genitalia. On the other hand practically one and all of the inflammatory diseases involving abdomen or pelvis, in male or female, may extend by direct or indirect contact through the lymphatics which in turn may anastomose with the lymphatics of one or both kidneys or of ureters or with the minute plexi which surround bladder, prostate and vesicles.

Therefore in the diagnosis it is necessary above all else to carefully search for the focus of entrance so to say. It becomes necessary in all cases, but particularly in obscure cases, to examine cases most thoroughly from every angle and be positive not to overlook any one or more possible sources. It is not to be denied that this is not an easy matter in many instances, but I can truthfully state that the more experienced, the easier it is to arrive at positive conclusions. In establishing these conclusions it is necessary, therefore, to ascertain, with the methods already described, the point of entrance of the bacteria into the urinary stream, whether from one or both kidneys, and I refer to these then as cases of kidney bacteriuria. However, the general examinations must determine as to whether or not the bacteria have gained entrance to the kidneys per blood stream, continuity or by the lymphatics, which are practically the same; or again, whether through a ureteral wall, as mentioned in one case, or further through the bladder or adnexa of the urethra. These are then referred to as ureteral, bladder, prostate or even seminal vesical bacteriuria cases. I do not believe the terms *total* referring to the renal cases and *partial* as to those arising from the prostate is a sound classification.

It is a recognized fact that an injured or a diseased intestinal wall allows the passage of bacteria, probably by way of the lymphatics and then by way of the blood stream. The character or severity of the lesions, however, have not been determined. It is very questionable whether normal, healthy mucosa will permit of this phenomena, although there are some authorities that seem to think so—just as there are some that believe that healthy kidneys will allow bacteria to pass.

TREATMENT.

It can readily be understood if bacteriuria is simply regarded as a manifestation of a focal infection that it cannot be regarded as a disease, *per se*. I believe this must be done, although the older writers treated the subject as a disease and did not regard it simply as a sign. With a fair knowledge of the etiology and pathology I am inclined to believe that this view is sufficiently convincing and that when the topic of treatment is considered, the basic or underlying cause must be taken into account. For this reason, after the demonstration of certain bacteria and their constant presence in the urine has been ascertained and also their place of entrance into the urinary stream, whether renal one or both, ureteral one or both, bladder, vesicles or prostate has been determined as the focus of infection, the harbors of the bacteria, similar to those found in the urine, must be looked for.

I have already pointed out, in case of acute or chronic infectious diseases, that the bacteria probably reach the kidneys per the hematogenous route. However, where the bacteria persist in the urine, undoubtedly focal conditions and thence lymphatic involvement naturally could account for their persistency.

Again, in focal diseases, distant from the kidney, the hematogenous route could be the mode of entrance, while again the lymphatics might also be involved and the blood stream could disseminate and permit the kidneys to excrete them. In these instances their origin in the urinary stream would be renal in character. But in other instances, particularly abdominal conditions such as I have referred to, may permit of the bacteriuria being renal in character. I have mentioned appendicitis and obstipation and gastrointestinal involvement of various kinds which apparently permits of lymphatic involvement. As these are directly connected with one or both kidneys, the bacilluria may either be one or both sided renal in character. As already pointed out, troubles may exist in the pelvis of the male or female or around the bladder, and the lymphatics may be involved and transmit directly to the lymphatics of the pelvis of the kidneys, and here again the point of entrance is renal in character. In some instances this seems to be direct involvement of the wall of the ureters, as is definitely known to occur in cases of appendicitis and the

entrance to urinary stream may be ureteral, as demonstrated in one instance by myself. Pus tubes or parametritic conditions in the female are frequently the source of the trouble.

The bladder type of bacteriuria, meaning by that the entrance of bacteria into the urinary stream by way of the bladder, is more common in the male, while the renal type is common both in male and female, but in my experience much more frequently seen in women than in men. This is accounted for by the fact that chronic involvement of the male genitalia, adnexa to the urethra, is exceptionally common. In these cases it is true there may also be involvement of lymphatics which ascend with the ureter, but in most instances the involvement remains around these parts. I have seen several instances where ulcerations have existed in the bladder, corresponding to that portion overlying the vesicles and the vesicles being markedly indurated, and where undoubtedly the bacteria gain, one might say, direct entrance into the bladder. It has been possible for me to demonstrate by expression of the vesicles or prostate that the bacteria gained entrance per urethram and thence into the bladder. Naturally in many instances of chronic urethritis, as well as stricture of the anterior urethra, bacteriuria has been noted, but in most instances posterior adnexa troubles co-existed. Again, take the renal type in women, and I believe it is fair to state that enteroptosis is more common than in the male—conditions are favorable for stasis and obstipation, and it is certain that these conditions permit of changes which will allow of passage of bacteria from the colon to the kidney lymphatics and thence be excreted through the kidneys.

Furthermore, although infections in the pelvis in women are admittedly frequent, yet the lymphatics are not as intimately connected with those of the bladder as in the male genitalia—hence the less frequency of this bladder type of bacteriuria in the female.

It is needless for me to repeat that in the treatment of bacteriuria the real cause must be treated whether it be by surgical or medical interference. As I have pointed out many possibilities, although not trying to enumerate all the possibilities, I will assume that it is sufficient for me to make the statement that to undertake the treatment in any other way would be mere loss of time and not scientifically correct.

I must admit, however, that it has been my experience that whenever bacteriuria has made itself manifest that neither surgical nor medical treatment for any one or all of these conditions has cured or freed the patient of the bacteriuria. This is rather a startling statement, but I must confess it has been my observation in many instances. I need only state that local treatment of genital involvement, i. e., of the posterior urethral adnexa has never cleared up any case in my series, nor has operative interference on these organs or abdominal organs such as the appendix and gall bladder nor female organs, or the female pelvis ever cleared up a case of bacteriuria that has come under my care. I know that these statements may not agree with the observation of others, but I wish to reiterate that in a period of over twenty years' observation of cases belonging to those under consideration, I have never seen a single case which has been freed of the condition referred to as bacteriuria.

For this reason where symptoms are present in cases of bacteriuria—although not necessarily due to the bacteria—but possibly to the underlying cause, it becomes necessary, and particularly where relief is frequently afforded, to treat the sufferers in a way which might be considered both as local and from a general standpoint. No matter whether the type is renal or bladder in character, it is advisable to institute treatment similar to the treatment in kidney infections, which naturally begins with attempts at prophylaxis. I have already stated that any condition whatsoever which may be conducive of infection must be treated, whether or not it be surgical or medical treatment.

Diet must be restricted and attention given to order bland diet—no alcohol, stimulants of any kind, no highly spiced foods and a limitation of nitrogenous foods. A liberal quantity of fluid but not pushed to extreme limits.

Ordinary advice as to luke warm baths, regulation of functions, limitations to exercise and violent work, prevention of unnecessary exposures to cold and dampness and suggestions as to vacation, rest and general mode of living.

Particularly where no surgical conditions of abdomen or pelvis are demonstrable, it is highly desirable to give strict attention to the antisepsis of the gastro-intestinal canal, vagina and bladder. There have been cases noted where strict anti-

sepsis of the bowel, by decreasing the bacterial supply, have lessened the bacteria in the urine.

Whenever retention of urine in the bladder is present it is well that bladder lavage is given, even if the bacteriuria is renal in character. Vaginal douches whenever leucorrheal conditions are present certainly should be advised.

Above all urinary antiseptics are chiefly relied upon in order to get the results. Hexamethylenamin is unquestionably the most thoroughly tried and satisfactory agent of this kind, although there are many others. Its action depends on the liberation of formaldehyde in the urine. The more acid the urine the greater the content of the formaldehyde and for this reason acid phosphate of sodium in one gramme doses three times a day while in the intervals one-half gramme doses of hexamethylenamin be given. As a rule I gradually, provided no untoward affects in the stomach or kidneys are noticed, increase to one gramme doses three times a day. In selected cases these quantities may even be increased, both of the acid phosphate of sodium and hexamethylenamin.

In children particularly I have noted that good or better results have been obtained by first alkalinizing the urine for a week or ten days with acetate or citrate of sodium and usually one quarter of a gramme three to four times a day are given previous to the administration of the acid phosphate of sodium and hexamethylenamin.

Medication frequently aggravates the local urinary symptoms and I have frequently seen where it is desirable not to give any urinary antiseptic at all, or only for short periods of time. Again, many instances where the same remedies can be given for long periods of time but only in moderate doses. It is not to be forgotten that hexamethylenamin frequently has effects possible due to the formaldehyde, which in themselves may be very undesirable. The formaldehyde or other products are particularly irritating to the kidneys and hemorrhages consequent to the irritation of the kidneys are not uncommon occurrences. Vaccine in the pronounced infections of the kidney other than colon bacillus infection has as far as I know given rather unsatisfactory results. As I have particular reference to bacteriuria and where the type of bacteria most frequently found is the colon bacillus, and admitting that in many instances of colon bacillus bacteriuria a colon bacillus infection pre-existed or occurred as a forerunner, and further admitting

that in the course of a bacteriuria there may be relapses of what can more definitely be called infection as both blood and pus occur in the urine at these times. I have come to the conclusion that vaccine treatment, accurately carried out, frequently gives equally as satisfactory results as in the colon bacillus infections of the kidneys. For this reason I have been in the habit of carrying out the treatment in every case where it is at all possible. If any improvement, whether local or general, I frequently repeat courses of vaccines after intervals of months. I cannot state that I have ever seen a case of bacteriuria clear up under this form of treatment. Nevertheless if scientifically carried out it cannot be of mischief. Its value in colon bacillus infection of the kidneys in my opinion is in many instances of unquestioned value.

The local treatment of the renal type of bacteriuria which consists of a passage of ureter catheters and the lavage of the pelvis or instillation of various forms of medication, is practically the only mode of treatment. Personally I am not adherent of lavage of the renal pelvis, whether it be with weak nitrate of silver solution or instillations of two to five per cent. nitrate of silver solutions, nor of the use of any of the protein salts of silver such as are used and in such strength as are used in pyelography. Nor has in my hands aluminum acetate ever given any startling results. Where it is desirable to establish the efficiency of the kidneys, I have always used phenolphthalein in preference to all other dye tests, and where it is essential to establish definite information as regards the pelvis I have of late preferred thorium solution to any of the silver salts.

Naturally in the course of diagnosis if dilated pelves are present but equally well in those cases of bacteriuria where the pelves are normal in outline, I am firmly convinced of the fact that to allow catheters to remain in situ as long as is bearable and often times ranging only from a few minutes from three to five days will give satisfactory results as I have repeatedly seen—relief of symptoms for varying periods of time. Furthermore, when repeated even more than two or three times, more or less comfort follows in each and every time in some cases. Whether it is simply the passage of the catheter in these cases where there is no apparent retention of urine in the pelves, or where there is no stricture or

anomaly present, it is scarcely possible to ascribe the beneficial results to drainage. In many instances I have introduced two catheters into a pelvis—in several instances where patients had had one kidney removed for one cause or another, I have done so, in one instance not less than ten times. During this period the general symptoms most pronounced and the urinary symptoms and findings particularly absent—except when acute attacks of pyuria would arise. In addition to these catheters I have rigged up a normal saline drop apparatus and allowed to flow for hours and days at a time. I cannot say that the good has been more than if the saline had not been used, but it has proven satisfactory in many instances. However, I must state that it is desirable to select cases where it can be carried out—naturally where there is no pain produced and the patient permits of it. It is not necessary to have two catheters in each ureter—one will do.

In the bladder type which includes the adnexa of the male urethra—of bacteriuria, the local treatment simply consists of the ordinary adnexa treatment which is familiar to all, simply stripping of vesicles and prostate, passage of sounds, instillation of weak solutions of argyrol; besides any further local treatment which is recognized for urethra and adnexa conditions. In some instances I have advised patients to irrigate their urethra and bladder with hot saline solution. This particularly in those cases where there is no pus present.

CONCLUSIONS.

That bacteriuria, that is the presence of bacteria in the urine whether urine is cloudy or clear, is simply a manifestation of a disease which is in contact with the urinary organs.

That probably always at the beginning and often times during the course, pus and even red blood corpuscles may be found in the urine. As far as I know, no satisfactory explanation has been given as to why the urine may be loaded with bacteria for months and years, practically free from all pus corpuscles.

That during the course of a bacteriuria there may be both general as well as local symptoms of a pronounced type apparently due to changes in the urinary tract manifested by pus in the urine, yet with no pronounced signs or even in the absence of signs from the focal cause.

That in the symptomatology the severity of the

symptoms often times depends entirely on the character of the urine. I mean in the quiescent stages where there is no pus, but where the quantitative amounts of bacteria are the cause of the various symptoms. Yet on the other hand some of the cases where the urine is perfectly clear to the naked eye, the symptomatology may be pronounced.

That bacteriuria is a manifestation; if once manifest is practically constant—in other words, of long duration.

That it has up to the present time not been proven to be the only existing cause of other conditions such as stone and neoplasm. However, I must admit that I have seen many instances where these conditions have co-existed.

That in the treatment it is necessary to establish the cause of the bacteriuria, whether the origin is due to a general infectious disease or focal condition. Furthermore, to establish whether the bacteria are renal or vesical in character.

That it is necessary not only to treat the cause but often times as well the places of collection of the urine and bacteria, as the pelves of the kidneys and bladder.

That it is my belief that an inveterate case of bacteriuria cannot be influenced to such an extent as to free the urine of bacteria. It must be admitted that cases have been reported as having been cleared up, but as far as my observation is concerned no inveterate case has been cleared up or even cleared up spontaneously.

IMMEDIATE CLOSURE IN SELECTED CASES OF ACUTE MASTOIDITIS*

J. SHELDON CLARK, M. D.

FREEMONT, ILLINOIS

For some years the question of securing an early healing in cases of acute mastoiditis has been to me an interesting problem. In dealing with infected wounds the general surgeon has come to the point where he is very much interested in lessening the duration of convalescence by secondary suture, or closure secured by means of (a) compressive dressings, (b) adhesive straps, (c) elastic lacing, or (d) sutures. The treatment as we have learned it from the Carrell-Dakin technique consists of four stages: viz., (1)

surgical treatment, (2) chemical sterilization, (3) bacterial control, (4) closure.

I believe it is possible to carry out this work in a measure in dealing with our cases of mastoiditis of the acute form. I have found it so at least in a recent case that came under my care. I believe it quite necessary to work out the bacterial flora that is present and predominant in a given case and if it would seem that the infection is of a mild type, then in such cases one might just as well close as I did in my case, and thereby lessen very materially the period in the hospital and the subsequent dressings and period of convalescence. I would therefore put more stress on the type of the infection, rather than the bacterial control as now used in which the number of bacteria per field is the index as to whether a given wound should be considered septic or sterile to a point where it is permissible to close.

In performing the mastoid operation, in acute cases of mastoiditis, it has been my aim to break down all the pneumatic spaces to be found in the mastoid process, particular care being taken to know the condition of the large cells at the tip and those overlying the lateral sinus, together with a well made antrotomy of the mastoid antrum. In this latter situation care being exercised not to enter so far as to disturb the relation of the ossicles in the middle ear cavity.

A case in point is the following: Mr. H. R., aged 45 years; machinist by occupation had been suffering the better part of a month with acute suppurative otitis media. There had been a spontaneous rupture of the membrana tympanum, but this afforded but temporary relief. When he came to me he was in great pain, had experienced several restless nights with much loss of sleep. He had but little rise in temperature with moderate increase of pulse rate. His color was ashy, he could not eat, was nauseated at times and his gait was very unstable. There was great tenderness over the mastoid area, but particularly so, well back of the usual point of greatest tenderness in mastoid cases of the usual type. This tenderness, I found later, to be due to infection in a large cell placed well back and posterior to the region of the lateral sinus. There were no marked external signs of the condition within the mastoid bone. There was no redness nor was there any marked swelling and, a point in particular, there was no edema overlying the bone. The other symptoms, however, were typical of an acute mastoiditis, with some swelling of the posterior-superior wall of the external auditory canal.

Upon removing the cortex, we found it very heavy, and the cells lying deeply in the mastoid bone. This in great part would seem to be the cause for the few

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external objective signs with which we had to deal.

Because of the extensive involvement of the bone it was necessary to make an unusually large cavity and the thought occurred to me that we might as well lower the facial ridge somewhat and treat the case as a radical operation in so far as the drainage was concerned. The ridge having been lowered to a degree sufficient to take care of the dependent portion of the wound, I then made flaps of the "T" variety, placed some xeroform wool drainage in the form of two wicks; one running up to the mastoid antrum and the other back down toward the tip. Michael clips were used to close the wound which was done completely. A few strands of silk worm gut sutures were placed in the lower angle which were allowed to remain 48 hours. In five days' time the gauze xeroform wool was removed and new wool was re-inserted using sufficient to lightly fill the cavity.

Use was made of 50 per cent alcohol at every dressing and the external dressings were kept moist with the solution. As a result of this treatment, the patient left the hospital at the end of the sixth day and in two and one half weeks was back at his bench as a machinist, with hearing that before the operation was dulled to such a point that he could not hear the operation of the largest piece of machinery in his shop, now in almost perfect condition.

A word regarding the xeroform wool dressing. I believe that this form of dressing is much preferable to the more common one that is used, and I refer to iodoform gauze or xeroform gauze. With the use of the gauze there is a tendency to pack the cavity in such a way as to get too much pressure and in this way interfere with drainage and perhaps cause inflammation in deeper structures. At least I have seen cases of beginning meningeal irritation do better after having a well packed dressing of iodoform gauze removed. This xeroform wool spoken of can be made with wool yarn and the strands reach straight through like the wires of a cable, thus aiding in the capillarity.

It might be mentioned that the opening made in the posterior wall of the canal did not close, nor was it permitted to close until the antrum and mastoid cavity were considered sterile. This as I said before had taken place by the end of second week.

The result I obtained in this case was so signal and so much more desirable than the former methods I had pursued that I therefore bring it to your attention. I would not make use of it in the very fulminant cases but in those with a low type of bacteria present I surely believe it a safe procedure and one that from an eco-

nomie point of view is well worth adoption, saving as it does the period of convalescence.

DISCUSSION

DR. CHARLES H. LONG (Chicago): Mr. Chairman, this method has been referred to by Dr. Clark as the Heath method. About eleven years ago, Mr. Heath was doing this operation and I happened to be in London and had a good opportunity of seeing him do one of his operations. Mr. Heath applied his operation to both the chronic mastoiditis and the acute. It was generally condemned in London by otologists, and it was said that it was not successful; in the acute cases it was a success, but as Dr. Beck has stated, why should you endeavor to drain over the posterior wall of the meatus when you have a great deal better and more dependent drainage back of the ear? I have done a few of these cases. In one case, especially, there was a perforation from the antrum into the external or posterior wall. In that case the wall was lowered and it was drained through that perforation, and while it did not heal immediately, it healed in a very short time.

DR. CLARK (Closing discussion): I would not use this complete closure in fulminant cases, but I believe if I had another such case to deal with and I recognized it in the same way that I did this one and had as large a wound as in this case and wanted to get cosmetic results, I would act just as I did in this instance.

I have had some of the worst kind of infections of wounds. Just lately, in the last two weeks, I did a radical mastoiditis in the case of a boy with chronic suppurative otitis of twenty years' standing. That wound became infected, and there was a process of pus that led down the neck and I had a most dreadful time. That was in a case of chronic mastoiditis with a radical operation. I can only report my results on this one case. I know that first the idea was brought out by Mr. Heath, of London. I never tried it; I never had the nerve to try it, but I got such signal results in this case that I wished to report you my experience. You can scarcely tell there is a line where that incision was made. He had an absolutely acute mastoid case. He was pleased beyond measure, and if I had another case of the same variety, I surely would use the method. It is a great time saver for the patient.

BUSINESS EVOLUTION AND THE FUTURE OF PRIVATE MEDICAL PRACTICE*

W. E. FAIRFIELD, M. D., C. M., F. A. C. S.

Fairfield-Bartran Clinic,
GREEN BAY, WISCONSIN

Recent years have been pregnant with great changes in the attitude of men toward each other. The "Brotherhood of Man," which was formerly a pulpit phrase, has become a practical entity to

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such an extent at least, that it has resulted in laws establishing this relationship between the employer and the employe.

Industrial institutions which formerly paid no practical attention to the housing conditions of their help, who were interested only in an abstract manner in those who became disabled, whose sole concern when an employe became maimed was to establish a lack of responsibility upon their own part, these institutions find themselves bound by law to care for the injured, and to pay a certain amount of the wage earner's former income to his dependents during his period of disability. Nor is this all. Many corporations and individuals, anticipating further legal burdens and individual demands, are acting ahead of their advent, and are providing nurses and medical attendants, not only for those immediately employed, but also for their dependants.

To this plan, the shortage of labor has materially contributed, for employers in their efforts to retain a working force have vied with each other in their policy of bestowing benefits upon employes and their families.

The enactment of minimum wage laws; factory inspection for the safeguarding of the employes from accidental injury; hygienic enactments, etc., all have tended to the centralization of authority in laboring bodies, and to collective bargaining—not only as to wage, but also as to accompanying conditions and surroundings, and tending to the development of an individual independence not present before the enactment of these laws.

Advertisements appear daily in the papers setting forth the advantages enjoyed by the employes of the advertiser, and it will be noted that the largest and most successful business institutions are the ones making the most publicity as to their quasi-philanthropy.

If these tendencies were confined to our own country, they might be either ignored or given but passing notice, but if we look about us, we find that other countries have outstripped us in the adoption of a so-called progressive or anti-bourbon policy. The growth of the idea that the State should assume the care of the injured has developed into a proposition for State care for all ills, and the climax is reached in England where it is proposed that everyone be given free medical

and surgical care, which will also include free hospital and nursing attendance.

During the brief period used in the preparation of this paper, the writer has found it impossible to keep track of the various radical measures proposed by legislators and others, all with a direct bearing upon the questions under consideration, and tending toward the establishment of State Medicine.

Without entering into a discussion of the economic value of this step, without considering its desirability from a political viewpoint, we may well inquire what will be its effect upon the medical profession at large, and the individual practitioner more particularly? And if it is concluded, that it will be destructive or even injurious, what course will be pursued to the end that the danger, if it exists, may be minimized? The writer contends that State Medicine will result in harm, not only to the individual practitioner, but that the public will suffer most severely by reason of the political character of the service and the lack of incentive for individual effort. He realizes that many members of the profession will disagree with this assertion, pointing to the fact that great advancements have been made at group centers, but it will still be maintained that these advancements originated by a group of men, working ostensibly for an institution, but really for personal ends, is a very different thing from the efforts of an aggregation of politico-medical men working for a salary, the size of which will necessarily depend upon the influence that can be brought to bear upon the legislator. A concrete example is that of our State institutions of learning, where salaries do not attract men of brains and erudition, except at a personal sacrifice, which should not be demanded by a great and self-respecting commonwealth. I may cite the fact that in some great eastern universities, many instructors receive from \$500 to \$1,000 per year.

In conversation with well established medical men, I have often heard the remark, "Well, it will not affect me. I am established and reasonably sure of the future." This insular complacency merits condemnation. There is no argument that will influence such an individual. He is interested, not in the future of the profession, but only in his own career. He is more or less famous, and no arrangement which a government can make will deprive him of a remunerative

clientele. Unfortunately, the famous and obscure must alike die, and it may be safely contended that fame will be very elusive when she must be courted in a noxious political atmosphere.

The yearly crop of graduates will drop into subordinate salaried positions, because it will offer the only course when the public is provided with free treatment, and only the exceptional individual will insist upon the exercise of his own right of selection. There will be a gradual disappearance of famous medical men, and they will be replaced by the type we find in our other politically managed public institutions.

Before inquiring into the question of cure for an established evil, it is timely to investigate the forces which seem to be pressing us into a position so undesirable.

Few men question the desirability of free biologic and chemical laboratories managed by the State and accessible to the most remote and isolated country practitioner. Few will deny that the feeble-minded and the insane, the degenerate and the criminal should receive State attention. Few will question the wisdom of isolation of contagious cases at State expense, but a practically unanimous agreement along these lines has led to the establishment of the free dispensary with free medicines furnished by the State, and free attendance furnished by some struggling practitioner.

The salacious sex question has been publicly discussed *ad nauseam* and now we are to have free clinics for the treatment of venereal troubles. Lodges and societies are banding together bodies of men, who collectively bargain for the services of medical men, and a State legislator counts the day lost when he has failed to introduce a bill that will give to ten voters for nothing—something that one voter will have to pay for.

We recognize the fact that the doctors of this country owe a debt to the State and to society. We are rightfully asked to do a certain amount of charitable work, and it is my experience that this work is undertaken cheerfully and that it is well done.

In public health matters and in community welfare work, the physician naturally leads, and the public may count upon his help with confidence. Where gratuitous service *shall end* is a matter that should receive careful consideration.

Collective bargaining for the services of physi-

cians, whether by clubs, lodges, insurance companies, or great industrial concerns has a tendency to lower the standard of service. One may point to individual examples of high efficiency, but the isolated instances do not disprove the main contention. A certain position pays a certain salary, and the maximum is fixed and final. The high minded medical employe, cringing at first under the familiar and unappreciative attitude of his patients, soon becomes calloused. He learns to bear the indifference of his clientele and finally answers cheerfully and promptly to the appellation of "Doc."

The club or lodge becoming dissatisfied with the services of its paid hireling, or even the individual who has a real or fancied grievance can and will make life a burden, and the doctor, once he has become a paid employe, loses confidence in himself to the extent that he will endure the ills that are, rather than flee to those he knows not of. It is a fact that a man who works for a salary rarely leaves it to engage in private practice. He seems to lose his aggressiveness and initiative and to gradually slide into the groove of the machine of which he becomes a part, protesting it is true, but mildly and more mildly until it becomes advisable to replace him in the interest of the machine itself. Then he will be fortunate if he draws a small pension to keep life and body together until the end of the weary journey.

I draw an absurdly dreary picture you say. If that is your opinion, you are entitled to it, but I will have you recall a few events of recent occurrence. Who would have thought, five years ago, of government regulations, such as now exist. Who foresaw the movement to allow labor to have representation on the boards of great and small industries. Who foreshadowed the passage of a law forcing industries, not only to care for the injured when the injury is due to the employer's neglect, but also to care for him and even pay his wages when the injury is the result of wilful disobedience of orders. If legislators can pass such measures, why not a Universal Utopian medical bill, and I ask you to remember that to the mind of the average legislator \$1,800 a year is a princely income.

HOW CAN WE MEET THIS TENDENCY

First—Theoretically we could refuse to serve, but we won't, and that is the argument against such a course. A few can and will refuse,

the balance will be forced to fall into line. Industrial insurance companies have no trouble to secure inspections at 25 cents each. Lodges have visits made for one dollar, and their voluminous reports are made out gratis, so why argue the point?

Second—We can organize. To my mind, organization for business is the solution of the problem. Lack of organization for business has kept medical men apart since the time of Aesculapius. The barbers who have always been inclined to the curative art, practice in groups, but we doctors only occasionally get together, and then we are under the influence of a centrifugal force which tends to separate us, namely, lack of business capacity and a business system.

There is no such thing as one form of business axiom for commercial concerns, and another for the medical profession. Inseparably connected with the pursuit of professional success, be its practice ever so ideal, is the sordid and disconcerting fact that the foundation of the whole structure must be a solid and virile financial system.

Profit must not be the sole, and possibly not even the primary object of such an organization, but money is an absolute necessity, and it must be earned in sufficient amount to relieve the minds of those who labor, from the financial cares and worries that so often impede mental progress.

A man practicing medicine alone may start with practically no equipment and little capital, and if he is an exceptional man, he will attain eminence and honor, but how much more success could come to him were he associated from the first with a group of men, all of good ability and all working for the success of all. Some may object that it is impossible to start group work, because of the attitude of a part of the local profession and their refusal to enter into such an arrangement. My answer is that when two men have agreed to work together, a nucleus has already been established. Potentially, a group system has been organized and its growth and development will only be limited and defined by the character, energy and ability of its constituent units.

This organization can carry on its work in a business like manner. It can afford an efficient clerical force, and not only the financial side of the business will successfully be met, but histories, case records and other data will be at hand,

with the result that the greatest benefit will accrue to the patient himself. One could not advocate any step which resulted in less efficient service, but one must advocate that which one knows will bring greater benefits and more comprehensive and efficient results.

We all acknowledge that we cannot become proficient in all medical branches, and then the majority proceed to practice all branches. We continue to look at the tongue, ask a question or two, write a prescription and collect a fee under false pretences. No real examination, no record, no exercise of brain, no results.

If we want an appreciative public we must mend our ways. We must bury present day advantages over our fellow practitioners, and in a spirit of cooperative good fellowship, form associations, which shall be enduring. The prime essential is a firm and fair business foundation, a system of accounting that leaves no doubt in any one's mind at the end of each month or year, as to the earning capacity of the humblest member of the group. And when this man earns a dollar, he should receive the whole of it and not an infinitesimal fraction.

Scientific endeavor, painstaking labor, assiduous industry, conscientious application, and good management will produce results in any organization, but cohesion and satisfaction can only be maintained when and where organization and operation are conducted in a spirit of complete fairness.

Individual groups, wherein the great bulk of the receipts go to a certain few will face a serious problem when the profiting individuals must be replaced by men who presumably will have a less numerous following. In other words, a group of men organizing for the practice of medicine will succeed not only in proportion to its scientific merit, but also in direct ratio to the fairness of its members toward each other, and the zeal with which each member encourages and assists the other members in their individual work.

A group so organized will be a power in the community. It can and will practice medicine in a way to command respect. Legislation that would seriously affect the isolated individual will not be feared. The dread of adverse legislation disappears in proportion to the success attained by a practicing group. A policy of practice, if you will excuse the phrase, is quickly acquired

by an association of men, and this policy, because of an interchange of ideas, is apt to be much more sound and workable than the governing forces developed and adopted by the individual practitioner. A solid front is presented against destructive practices and influences. Just as the well conducted banking house is a greater community power than is the individual money lender, so stands the group above the individual. New members are added under the protection of the parent organization, and the young man or woman while waiting for the development of an individual practice is assured of a comfortable living unclouded by the specter of want. He will devote himself to study and improvement and his fresh enthusiasm will supply a much needed leaven to the spirit of the place.

Some will say that the majority of individuals cannot unite to form groups. Their geographical isolation in itself will prevent. I have a vision of the time when even these will come into such organizations. There is nothing to prevent. A keen diagnostician at the cross roads, though he may neither operate nor attempt to master the technique of the determination of kidney lesions, may nevertheless be a very valuable member of a group prepared to carry out the program he may advise. He will not be a salaried or commissioned agent, but a bona fide member of the firm and he will have a voice in the conduct of its business affairs, and a substantial interest in its financial returns.

Our colleges have been sadly remiss in many things, but in none so much as in their failure to provide a modicum of business training for the medical student. Some agitation along this line has been started, and some of the colleges have really inaugurated such a course, but the effort has been fragmentary and unsatisfactory, and the young graduate still continues to base his investments upon financial statements, wherein the principal asset is "good will and patents."

The average physician's books of accounts do not belong in a business house. They should be in a museum. His business is operated without even a yearly trial balance, and because his gross is assumed to be everything between six and thirty thousand, he rests content, feeling that he is more or less rapidly accumulating a com-

petency. Like the old fashioned slot machine, he does make some accumulations, and as with the slot machine periodically someone with a scheme drops a nickel and the accumulations are disgorged. Dr. Delafield once said that in a financial way "doctors cut up small." Some of them cup up small in other ways as well.

Get rich quick schemers usually select doctors as their special prey. One of them once told me that "the American Medical Directory was his best asset." Is it not time to bring to the doctor a knowledge of present day business evolution? When other businesses are becoming highly organized, must the profession stand still? Men of the legal profession will tell you that those who have not kept pace with the legislative changes of recent years, those who have not foreseen its effects and consequently have been blind to its results, are being hopelessly left behind in the race. The man, for example, who specialized in personal injury suits finds that the compensation laws have completely destroyed his business. So I believe it will be with the man who in our own profession neglects the business side of the problem which confronts him.

The cry of "mercenary medicine" has been the shiboleth of the reactionary, and when the question of the business phase of practice is brought up in a medical meeting, some good old soul, whom we all love and respect, rises and says: "I have never sent a man a bill, and I have not suffered." I heard one such make this statement years ago. He is still living, a splendid type of the old school doctor and he would be in abject want were it not for the bounty of a man who, thank God, recognized the doctor's worth and an obligation that could not be requited by the payment he had made at the time.

The old time conditions have been altered. A true evolution is going on as surely in the medical profession as in other walks of life, and the evolution tends to better days if we recognize it and act. We must act on the indisputable assumption that a dual obligation is present, the one to maintain the highest standard of professional attainment, and the other to make our work profitable, enduring and, pleasant by the adoption of business rules and standards. Even the man who works by himself alone will find great satisfaction in the working of a system which brings order out of chaos.

PENETRATING INJURIES OF THE KNEE JOINT*

H. C. MITCHELL, M. D.

CARBONDALE, ILL.

Surgery of the knee joint has probably made greater advance in the past few years than surgery of any other part of the human anatomy.

During the war of the Rebellion, a gun-shot wound of the knee joint was practically sufficient provocation for amputation of the limb—the mortality rate for such wounds being 60.6 per cent. Since the advent of the germ theory, and our knowledge of aseptic surgery has been developed to such a high degree, the mortality rate has been greatly lowered. During the Spanish-American war the mortality rate for injuries of the knee joint was 6.5 per cent, and 4.2 per cent during the Boer war. Until the past five years, a traumatism of the knee joint with severe infection meant, in the majority of instances, either limitation of motion, a stiff joint, or amputation. I can recall but four cases that I have treated, with infection, where I inserted drainage through the synovial sac that subsequently had unimpaired motion.

Our opportunities for treating injuries of the knee joint are not so frequent in civil as in military practice. And yet, the surgeon who is located in a large railroad center, surrounded by scores of mines is called upon to treat many cases of injury to the knee joint.

Soon after the beginning of the world war, it was realized that all methods of treatment of a well-established, purulent arthritis were wholly inefficient. When man power was so badly needed, it was not enough merely to save a limb with a stiff joint; hence every effort was put forth to discover some form of treatment that would prevent infection, save the limb, and preserve the function of the damaged articulation. To accomplish successfully that end, it was found there were several definite principles that must be carried out in the different forms of penetrating injury of the knee joint. Prompt treatment of these cases is one of the cardinal principles, as long delay means infection. If a patient has to be transported—and he nearly always does—the first thing the surgeon should do is to immobilize the limb, as great damage is often done by fre-

quent movement of the limb, and the future utility of the joint jeopardized.

I remember being called in consultation to see a young lady, who while running across a college campus, tripped and fell on a horse-shoe nail. The nail, all but the head, was driven into the knee joint. The physician who was first called attempted to pull it out while she was still on the play-ground, but not having the proper instruments failed to do so. Without immobilizing the limb he took her to her home, and on arrival there, found that the nail had disappeared, and the wound was practically closed. The doctor was of the opinion that the nail was lost out in transit, and dressed the wound. The pain, however, continued so severe that I was called to see the patient with him, and on x-ray examination we found the nail entirely embedded in the synovial sac. The flexion and extension of the knee had caught the nail between the strong hinge-like joint of the tibia and femur and pulled it in. I made a semi-lunar incision dividing the ligamentum patellae, laying open the joint, removed the nail, thoroughly excised the track of the wound, stitched the synovial sac to the skin, and closed the wound. The patient made an uneventful recovery with perfect function of the joint.

In all penetrating injuries of the knee joint, nothing should be taken for granted. In every case the wound should be subjected to a most thorough and searching examination, both as to the track of the injury, extent of the injury, and location of the foreign body. This can be fairly well done by the pain elicited on pressure over the track of the wound, by inspection, and by the x-ray. If synovial fluid is discharging from the wound it should be examined at once for micro-organisms.

For purposes of accurate description and treatment, I have divided these injuries into three classes:

1. Cases of clean, perforating wounds of the knee joint with fragments of railroad torpedoes, pieces of steel, pistol and rifle bullets passing through the joint from side to side, or passing through the joint and finding lodgment in the lower end of the femur or upper end of the tibia, inflicting but trivial damage to the bone or joint surfaces, leaving a small, clean wound that rapidly closes, and leaving no evidence of inflammatory reaction.

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In these cases the limb should be completely immobilized. Sometimes fluid forms in the joint in these cases. If it does it should be removed by aspiration, and examined for micro-organisms. And yet, if there should be approaching infection, its advent will be heralded by rise in temperature, swelling, redness and pain. If no micro-organisms of a virulent character are found, the case will probably go on to resolution, with good function of the joint. The foreign bodies in the ends of the bones soon become encysted and do no particular harm. The limb should be kept immobilized for a week or ten days.

2. Cases of penetrating or perforating wounds of the joint, with large apertures of entrance and exit, and in which the foreign body is retained in the joint.

In these cases also, the limb should be kept completely immobilized until an x-ray is made, as the surgeon should never grope blindly for a foreign body in the knee joint. It should be accurately located. Before any surgery is attempted, however, the limb should be carefully prepared. Both the wound of entrance and exit should be carefully and thoroughly excised, and if there is any doubt of the thoroughness of the job, the cautery should be used in addition, all foreign bodies removed, such as dirt, shreds of clothing, loose spiculas of bone, cartilage, dead tissue and projectiles. My theory is, that the surgeon should see well what he does and do well what he sees. Remove all dead tissue, inspect all important blood vessels, and secure all bleeding points. Always look carefully for beginning gas gangrene. No foreign body should ever be left in the joint, for it will in a very short time invite infection and suppuration. If a foreign body is overlooked in the joint, and it does not produce infection, it will produce great pain and discomfort and prevent the patient from walking normally on his limb, and will necessitate removal in the future. If the synovial membrane is not too badly mutilated and it is thought best to insert drainage, it should be done by stitching the synovial sac to the skin, or by inserting a drainage tube into the wound, but never into the synovial sac. It is my opinion, that the greatest advance in knee joint surgery is largely due to the excision of the track of the wound, and to the fact that drainage is no longer put into that cavity. Practically all surgeons now agree that it can only be productive of evil and that either

limited motion or a stiff joint will invariably follow as a result of such practice.

After the track of the wound made by a missile or foreign body has been thoroughly excised, all foreign bodies such as bullets, shrapnel, mud, shreds of clothing and spiculae of bone are removed, and the cartilaginous surfaces carefully wiped with some antiseptic solution such as ether or alcohol, and drainage tubes sutured into the wound but not into the synovial sac; the wound may then be closed and dressed.

The synovial fluid that discharges should be examined often, and if streptococcus or staphylococcus is absent the wound will probably heal with good function of the joint. But if on examination streptococcus or staphylococcus is found, the wound should be watched from hour to hour and free drainage instituted, and if necessary the Carrel-Dakin method of irrigation instituted.

3. Cases of perforating or penetrating wound of the joint with extensive intro-articular fracture, or destruction of one or more of the condyles.

Where there is a penetrating wound of the joint with intra-articular fracture, the wound is more serious and should be treated as previously described, great care being taken not to sacrifice or damage the articular cartilages. If either of the condyles has been torn away, and there is extensive fracture of the joint surfaces, it will be better to excise the joint. If there be severe infection, it is good practice to place the limb on an open splint, applying extension so as to separate the ends of the bones; fill the space between with sterile gauze, preferably with iodoform gauze, and institute drainage after the Carrel-Dakin method, until the stage of clinical sterilization, when the bones may be fitted together, a splint applied and the wound allowed to heal.

In the cases where there is extensive laceration of the soft parts and injury of the large vessels, or beginning gas gangrene with extensive fracture accompanied with severe infection, amputation should be resorted to at once.

SURGICAL TREATMENT OF GASTRIC ULCER, WITH REPORT OF CASES*

W. J. CARTER, M. D.

MATTOON, ILL.

In studying the subject of gastric ulcer all must be impressed by the difference of opinion

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of the various authorities on this disease as to etiology, complications, and treatment.

In practice we are surprised by the frequency with which the symptoms of gastric ulcer are treated as *symptoms*; not only with no effort to make diagnosis, but even with every appearance of perfect satisfaction to call it by such vague and indefinite names as acid indigestion, dyspepsia, etc., while others a little more progressive but still lacking insight have made diagnosis of surgical conditions such as colicystitis, gallstones or appendicitis, and advised surgery for some one or more of these conditions, only to be disappointed in results.

It remains for the general practitioner to familiarize himself with the symptoms of gastric ulcer and the points of differential diagnosis which mark off the above named conditions from gastric ulcer. Since the confusion of these conditions is common, and the consequences to the patient are important, practitioners must learn. In some cases a carefully taken history is sufficient to make the diagnosis, while others make it necessary to draw upon all the means we have for differentiation. The x-ray is probably the greatest single aid we have in differential diagnosis.

Etiology: The first problem for the profession is to fix the etiology of this condition, that is found in from 3 to 5 per cent of all autopsies. This, however, is not so easy as it might seem, when we have such authorities as John B. Deaver placing infection first as a causative factor, while Sippy states, that "the role played by micro-organisms is probably very slight," and places the causes as follows: First: Malnutrition of a circumscribed area of gastric wall exposed to the action of the gastric juice; second, the digestive action of the gastric juice, etc.; while all are agreed that an acid medium is the one essential for gastric ulcer.

Complications: Of the complications the one on which all seem to be agreed, the most serious, is carcinoma, and here we have a very wide difference of opinion. The Mayo Clinic in 1917 reports 71 per cent of their gastric cancers as associated with ulcer, and 68 per cent of ulcers were complicated with carcinoma. On the other hand, more recently, Kuttner expresses himself by saying that "transformation of ulcer into cancer we have not observed."

In clinical reports compiled by James Ewing

of New York we find the following statement: "Among acceptable authorities it is possible to choose between 2 and 68 per cent of ulcer becoming cancerous and between none and 71 per cent as representing the proportion of gastric cancers that arise from ulcers."

Treatment: In the first place one of the things that cause most of the contention between internist and surgeon is the difference in their conception of ulcer. The internist recognizes atrophic areas in the mucosa as ulcers, while the surgeon's idea of ulcer is an indurated area in the stomach wall denuded of mucosa and readily palpable on the stomach surface.

If my conclusions are correct then, it can readily be seen that to compare the end results of the surgeon and the internist is to give the internist a decided advantage. The surgical mortality will continue to be relatively high so long as there is no distinction made between the two conditions; because the surgeon is called upon to relieve the case after some one of the complications have arisen that make any operative procedure hazardous.

We find in Dr. Lippman's analysis of 100 gastroenterostomies the following: "Three recurrent ulcers operated on for adhesions, one case of undigested food in stool; twelve cases were not completely relieved of their symptoms, being unable to take full diet without hyperacidity." This makes twenty-nine cases with poor results, eight fatal cases, one of hemorrhage, two post-operative shock, one of peritonitis, and four of pneumonia. He admits four of the bad results were on cases in which the ulcer could not be demonstrated.

In the same article he makes the startling statement that, "Where the surgeon puts an opening in the stomach is not where it stays, and cites two cases, one two and the other four years old, which had migrated to the right where it emptied by spurts with each contraction of the stomach, the other drawn to the vertical part of the greater curvature with food wandering through both the stoma and the pylorus impartially."

Finny reports an immediate mortality of 5 per cent with 94 per cent cures from his pyloroplasty.

In Smithies' study of 571 cases of gastric ulcer operated on we find some very interesting figures. Of this number 226 were treated by

posterior gastroenterostomy with or without pyloric closure or local gastric resections combined with removal of appendix or drainage of gall bladder was the operation of choice in 95.4 per cent of cases.

In 4.24 per cent, anterior gastroenterostomy was similarly employed with the following results:

	Per Cent
Pain or distress.....	61.5
Anorexia	12.8
Vomiting	19.9
Gas, bloat, etc.....	31.0
Constipation	20.3
Nausea, constant or irregular...	18.9
Weakness	18.0
Nervous	8.2
Gross hemorrhage	6.01
Water brash	15.7
Eruclatations	43.9
Diarrhea	8.9
Weight loss	16.2

The internists frequently make the statement that the surgeon simply drains the stomach, and when asked why it is done we fall back on the statement that it works, but we can't offer any explanation of it. To this statement I will add that when the acid bolus of food passes the pylorus it stays within the first two and one-half inches of the duodenum until it becomes neutralized by the duodenal secretions regardless of the contractions of the pyloric end of the stomach. This, done, another acid bolus of food is delivered through the ring which explains why 80 per cent of ulcers are found in the first two and one-half inches of the duodenum.

Sippy has shown that pepsin must have free acid above five points before it acts, and the higher the free acid the more active the pepsin, while combined acids cause the pepsin to act slowly.

The duodenal secretion is stimulated more by food than gastric juice; thus in taking food the pyloric ring is stimulated by the alkali and food begins to pass into the duodenum.

This explains the case in which the individual with hyper-chlorhydria has continuous trouble because of the large amount of acid gastric juice held in the stomach by spasms of the pyloric sphincter in the food-free stomach. This individual will get some temporary relief by taking food which stimulates alkaline secretions which

in turn relaxes the sphincter. In short, the lack of balance between the free hydrochloric acid and duodenal alkalies are responsible for the developing and maintaining of peptic ulcers.

It has been shown by various observers that there is a decrease of from 20 to 30 per cent in free hydrochloric acid following gastroenterostomy. This is due to the mixing of the local alkaline secretions of liver and pancreas with the stomach secretions by regurgitation through the stoma not controlled by sphincter, as in the case of pylorus during the contractions of this portion of the stomach.

Report of cases:

H. M.—Male, aged 63 years, retired farmer, normal weight 135. Stomach trouble for 18 years; at times he would be comparatively well for two or three months, only to have pains and vomiting attacks more or less severe for a time until about a year ago, then seemed to vomit almost everything he ate. Weight at present 90 lbs.

I saw him first Feb. 25, 1912; advised operation which was done Feb. 28, 1912. Found large indurated prepyloric ulcer; did posterior gastrojejunostomy; did nothing with ulcer; recovery uneventful, began taking solid food in one week with no pain or vomiting. Has not had any digestive disturbances since the operation. Present weight 135. Fluoroscoped and plate made May 2, 1919. The barium meal is seen passing freely through the stoma; none of the meal passes through the pylorus. There is no cap shown on any of the plates.

F. W.—Male, aged 56 years, machinist. Saw him first March 11, 1919. Abdominal pains at times for 7 years, acid stomach, food relief. Recently very tender in upper abdomen most of time, vomited but no occult blood. Referred to x-ray March 12; most of test meal retained after seven hours. Large hypotonic steerhorn stomach, normal contour. Hyperperistalsis 3. Bulb not visualized. Deformity of bulb on all plates. Diagnosis: Duodenal ulcer. March 15th operated. Right rectus incision; indurated ulcer on first part of duodenum the size of a quarter with omentum adherent to ulcer. Posterior gastrojejunostomy with removal of appendix clubbed at end. Fifth day vomited gastric contents with some bile, no other symptoms. Has had no further vomiting or pain, gaining weight and back at work in six weeks.

Fluoroscoped six weeks after operation. First portion of barium meal passes through new opening rapidly, latter portion accumulates in the stomach and a small portion may be seen passing through the pylorus while the greater portion passes through the stoma. Plates show food is passing both ways.

L. G.—Male, aged 36 years, farmer. Called to his home Nov. 23, 1917, found him in severe pain in upper abdomen. Muscles rigid, etc.; three days ago vomited a brownish fluid with some particles of food; very tender over upper abdomen on palpation. History of

having had a great deal of periodic stomach trouble for 10 years. I referred him for fluoroscopic examination. Report: Filling defect on lesser curvature, incisura opposite, about mid-portion of the stomach. Diagnosis: Perforating ulcer on lesser curvature. Plates show perforating ulcer with accessory cavity. At this time I advised surgery explaining the dangers of perforation but he refused.

July 6, 1918, at 6 A. M., I was called to see him, suffering very intensely with pains in abdomen. Began suddenly about 6 P. M. the evening before when he developed a sudden severe pain in abdomen which continued so severe that he was unable to change his position and sat up in a chair all night unable to lay down. Examination showed pulse 140, temperature 97, perspiring freely, abdomen muscles very rigid and hard. Diagnosis: Perforation of ulcer.

Took him to hospital; operated immediately and found very large indurated ulcer about the middle lesser curvature posterior side with small perforation about center through which secretions were passing. I inverted the ulcer as best I could, with 20-day catgut stitched a piece of omentum over all of area and did posterior gastrojejunostomy.

Made uneventful recovery so far as stomach symptoms are concerned. He is now at a tubercular sanatorium, being treated for pulmonary tuberculosis, but has not had any digestive disturbance since operation.

Mrs. C. W.—Aged 56 years, housewife. Consulted April, 1917. Family history negative. Personal history. Has had stomach trouble for 12 years, pain, vomiting, hunger pains with food relief. About four years before had been operated on and a solitary stone removed from cystic duct which seemed to give some relief for a time, but the attacks became more severe and vomiting more persistent. States she had vomited food taken a day or two before. Eight months ago had a very severe attack of pain in abdomen; fell on floor, unable to get up until help came two or three hours later; for some time after this could scarcely move because of the pain and soreness in the abdomen. Present condition: Vomiting practically all food and liquid taken; very weak and emaciated. X-ray report: Six-hour residue, major portion of meal retained. Stomach below brim of pelvis. No duodenal cap. Diagnosis: Pyloric obstruction. Operated on June 5, 1917.

On opening the abdomen found indurated mass about the pylorus, lesser peritoneal cavity obliterated, unable to get posterior to stomach, did anterior gastrojejunostomy. For some time patient seemed to do fairly well, retaining food, but began vomiting again and continued until about six weeks later died of inanition. No post mortem.

J. C.—Male, aged 47 years, bookkeeper. Family history: Father died of gastric cancer at age of 68, otherwise negative.

Had hip dislocated when a child, walks with limp; otherwise negative, except stomach trouble for 25 years. At times is fairly comfortable but had attacks when he would have trouble for a month or two in

which he would have food relief; would take food at night to stop pain in stomach.

Has never vomited blood so far as he knew. Last two months had been able to retain almost no food. Very weak and emaciated, tender in upper abdominal region.

Referred to x-ray: Six-hour residue at least one-half of meal retained. Large hypotonic stomach, hyperperistalsis, filling defect on lesser curvature slightly posterior and about two inches from pylorus. Diagnosis: Large gastric ulcer with a possibility of malignancy.

Operated on April 16, 1919. Very large indurated ulcer in lesser curvature posterior, about three inches from pylorus. Made posterior gastrojejunostomy. Had but little pain following operation, nausea persisted, and he constantly spat up food that was taken and with it a great deal of bile. Seemed to grow weaker and the eleventh day following operation died.

Autopsy showed anastomosis healed perfectly, opening admitted three fingers, no adhesions. Portion of ulcer removed showed chronic inflammatory changes, connective tissue proliferation and round cell infiltration with no thickening of blood vessels. Not malignant.

From the foregoing complicated cases of ulcer operated on with 40 per cent mortality it can be readily seen that to credit surgery with the failure is to place the responsibility in the wrong place, since each of these cases represents a medical failure either of diagnosis or treatment and surgery claims 60 per cent cure.

It seems to me it is time the profession as a whole should cooperate to the mutual benefit of all concerned as there is enough responsibility for physician, internist, and surgeon, and without the cooperation the patient is not getting from our profession all he has a right to expect from us.

REFERENCES

- Chase: *Journal Maine Med. Assoc.*, Jan., 1919.
C. H. Mayo: *Minn. State Med. Assoc.*, Aug., 1918.
Smithies: *Surgical, Gyn. and Obs.*, March, 1918.
Mayo Clinic, 1917.
Deaver: *Surgery, Gyn. and Obs.*, May, 1918.
Kuttner: *Langenbeck's Archiv.*, 105, 788.
Lippman: *Calif. State Jour. of Med.*, June, 1918.
X-ray: Dr. C. E. Morgan, Mattoon, Ill.

DISCUSSION

(Abstract)

DR. PERCY (Chicago): I thought that a large percentage, especially of acute ulcers of the stomach, should be treated medically, and if treated properly will recover and remain well, provided they live under reasonable conditions, and provided they are not left with a chronic gall bladder infection, which may often be a predisposing cause of the ulcers. He does not believe that the acute case with severe hemorrhage is necessarily an indication for surgical interference.

Surgical interference should be left entirely for chronic recurrent cases, so far as gastric ulcers are

concerned. The types of cases described are the ones which are very apt to do well following surgery.

For instance, the first type of case, with a large prepyloric ulcer with marked obstruction usually does well.

As to the operation itself he thought from one of the pictures that the Doctor's gastro-enterostomy was not near enough the pyloric end of the stomach. The thing of most importance in connection with a gastro-enterostomy is its location, not so much how it is done or what it is done with, but location. If a gastro-enterostomy is made well over in the pyloric end of the stomach, as near the pylorus as possible, they usually work well. If it is made near the center of the stomach, they work well for a time, but these cases finally have trouble.

The natural tendency of the stomach is, of course, to shoot the food across into the pyloric end, and they will shoot it right across a gastro-enterostomy in the middle of the stomach, but if the opening is over at the other end, the stomach will drain. He considered this really the most important part in connection with these gastro-enterostomy cases.

DR. A. A. STRAUSS (Chicago): Dr. Carter speaks of the etiology of ulcer. The treatment of ulcer should be based on the etiology. Rosenow's work on the etiology, I believe, is as nearly correct as anything we have at the present time and also coincides better with the clinical findings of ulcer than any other theory. Histological examination of all excised ulcers shows streptococci. Whether they are of a selective type or not does not matter, but this finding proves one clinical fact—that ulcers are a localized infection. Men in large clinics will excise gall bladders and appendices because they show infection, but will perform a gastroenterostomy and leave an ulcer—which is a similar lesion—in the stomach. In fourteen cases of stomach ulcer showing a hyperacidity before excision of the ulcer, fractional test meal following operation showed the acidity to be normal or subnormal, which speaks volumes for the fact that the hyperacidity is the result of the ulcer rather than a producing factor. Gastroenterostomy does not materially improve this condition. The emptying time of the stomach is not increased beyond normal, and as the ulcer still remains very little is accomplished by this type of operation. I believe that every ulcer on the stomach side of the pyloric ring should be excised and a plastic operation performed on the pylorus which will increase the emptying time, so that the stomach will empty one-and-a-half to two hours. This plastic consists of excising a wedge-shaped piece of muscle at the pyloric ring without injuring or cutting into the mucosa. The wedge-shaped piece has its base on the pyloric ring and its apex in the pyloric antrum. This area is covered with omentum. This procedure eliminates the pyloro-spasm and has the same effect as cutting away a portion of the anal sphincter.

The combined operation of excising the ulcer and the pyloroplasty requires less time, less surgical skill, and produces less shock than a gastroenterostomy. It does away with the pathologic condition and gives the

stomach a rapid emptying time, and these things are not accomplished by the ordinary gastroenterostomy. I believe that gastroenterostomy is indicated only when an obstruction occurs at the pylorus due to cicatrization of a benign ulcer. The duodenal ulcers that cannot be excised should be closed off by a permanent pyloric closure by means of a fascial transplant plus gastroenterostomy.

DR. S. MUNSON (Springfield) noted that in his line of work, internal medicine, he sees many cases that have been operated on by the surgeon for gastric ulcer, and in secondary operations has seen the pathological conditions which are existent from gastric-enterostomies.

In one case he had advised operation because of the great amount of adhesion. In another case in which he advised a secondary operation the attachment of the intestine to the stomach by the gastro-enterostomy was at too high a point, so that the smaller curvature was at a lower point than the greater curvature.

He believes that every surgeon who lives to be middle-aged, fifty to sixty years, who has been doing gastro-enterostomy for gastric ulcers, and presumed gastric ulcers, will have these cases, as John B. Murphy stated a few years ago, "Coming back to his office."

Dr. Percy mentioned here the indications for operations of gastric ulcers are very definite, and when done under those circumstances, providing his surgery is good, the results are good. I think that in the Doctor's instance where he has treated these cases surgically, and there has been no medical trial, in most of his cases, he has had fair results. Still there was no medical effort made, consequently, he could not determine as to the necessity for this surgery, because of not having the medical treatment.

Surgeons are not doing the gastro-enterostomies today that they were doing ten or fifteen years ago.

He approved the essayist's statement that in the treatment of these cases the internist and surgeon should go hand in hand.

DR. HAEERLIN (Chicago) believes that if the technique is right and the gastro-enterostomy placed right with sufficient opening made, you will get good results.

In cases of gastric ulcer oftentimes our diagnosis is simply tentative, and after we have made our gastric analysis, our fluoroscopic and x-ray and stool analysis and gone over our physical findings and blood examinations, we are still in doubt. In those cases if the symptoms keep up for over three years, he always recommends to the individual an exploratory laparotomy, and many times you will find some trouble along the gastro-intestinal tract that you can correct.

Another thing it is well to bear in mind is that many of these stomach cases are reflex, and it is well to go right down the intestinal tract to the appendix and to the uterus.

One ought to have a real indication before doing a gastro-enterostomy. Stomach surgery should depend upon your findings, and not be promiscuous.

If after opening up into the abdomen, you find a

condition of stenosis, then you know that you want to do something that will relieve or will drain the stomach. If you find a number of ulcers in the duodenum, you should go around the duodenum and in those cases you can do a gastro-enterostomy.

Dr. Carter (closing discussion): I wanted to impress upon the profession necessity for co-operation between the internist, the general practitioner and the surgeon, and when this thing is done, we will find that our patients will get more than they have gotten in the past. There are many cases that are purely medical. I selected these cases to show the type of cases that do not get well from medical treatment and that are amenable to surgery, sixty per cent. There are some cases that, of course, we are bound to lose from the very fact that they are held by the internist, with the present method of holding these patients, until they are poor risks at best for surgery; but a gastro-enterostomy done properly when it should be done, I think, will save a great many lives.

POST-GRADUATE WORK IN GREAT BRITAIN

All Canadians must be interested in the really serious attempt being made by the profession in England to establish this work on a basis that will make it attractive to students the world over. This move was first made by Sir William Osler while the war was still in progress, and when it was realized that the German and Austrian schools would no longer be able to attract the students from the allied countries. To his foresight and magnetism must be attributed the early organization work that has been going on quietly during the last two years, and which has culminated in the recent visit of Sir St. Clair Thompson to Canada and America.

So many Canadian and American medical men have had the privilege of seeing London more or less intimately during the war that the chance of going back there for a post-graduate course will always be a pleasing anticipation. That the clinical material there is varied and abundant is unquestionable. London, owing to its vast size and because it is the greatest shipping point in the world, is undoubtedly able to supply examples of diseases contracted in all parts of the world.

Berlin and Vienna by their perfect organization were able to control post-graduate work. The English hospitals made few attempts to wrest this position from them. Visiting doctors were received politely in London, but there was no desire to make things attractive for them so as to induce them to get the instruction needed for doing special work.

The Reception Committee, presided over by Sir St. Clair Thompson, has arranged to meet students on their arrival in London, and on finding out their wants will put them in touch with teachers who will be anxious to give them exactly what they desire. In other words, they will supply your wants, whatever they may be, at a price that will make it attractive for you. Libraries, museums and hospitals are being linked into the scheme so as to make it convenient for the students.

It will be a distinct advantage to students to dispense with a foreign language and to be able to complete their work in such a city as London. The scheme, if worked out on the lines suggested, should be a success at any rate as far as the students from the Empire are concerned.—*The Canadian Medical Association Journal*.

THE HEALTH HABIT

Twenty years ago I knew a man called Jiggins, who had the health habit.

He used to take a cold plunge every morning. He said it opened his pores. After this he took a hot sponge. He said it closed the pores. He got so that he could open and shut his pores at will.

Jiggins used to stand and breathe at an open window for half an hour before dressing. He said it expanded his lungs. He might of course have had it done in a shoe shop with a boot stretcher, but, after all, it cost him nothing this way. And what is half an hour?

After he had got his vest on Jiggins used to hitch himself up like a dog in harness and do shadow exercises. He did them forward, backward and hindside up.

He could have got a job as a dog anywhere. He spent all his time at this kind of thing. In his spare time at the office he used to lie on his stomach on the floor and see if he could lift himself up with his knuckles. If he could, then he tried some other way until he found one that he couldn't do. Then he would spend the rest of his lunch hour on his stomach, perfectly happy.

In the evenings in his room he used to lift iron bars, cannon balls, heavy dumbbells and haul himself up to the ceiling with his teeth.

He liked it.

He spent half the night slinging himself around the room. He said it made his brain clear. When he got his brain perfectly clear, he went to bed and slept. As soon as he woke he began clearing it again.

Jiggins is dead. He was, of course, a pioneer; but the fact that he dumbbelled himself to death at an early age does not prevent a whole generation of young men from following in his path.

They are ridden by the health mania.

They make themselves a nuisance.

They get up at impossible hours. They go out in silly little suits and run marathon heats before breakfast. They chase around barefoot to get the dew on their feet. They hunt for ozone. They bother about pepsin. They won't eat meat because it has too much nitrogen. They won't eat fruit because it hasn't any. They prefer albumen and starch to huckleberry pie and doughnuts. They won't drink water out of a tap. They won't eat sardines out of a tin. They won't use oysters out of a pail. They won't drink milk out of a glass. They are afraid. Yes, sir, afraid. Cowards!

And after all their fuss they presently incur some simple, old-fashioned illness, and die like anybody else.—STEPHEN LEACOCK, in *Dallas News*.

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NOVEMBER, 1919

Editorial

BACK TO A HUNDRED AND TWELVE PAGES.

It is with a feeling of satisfaction we announce that with this issue the JOURNAL goes back to its ante-bellum status. War restrictions, the high cost of labor, material, etc., forced the management to reduce the size of the JOURNAL to 96 pages.

Perseverance and hard work enabled us to in-

crease the size of the October number of the JOURNAL to 104 pages, and this month we have added another 8 pages, making 112 pages in all. This, we believe, is the record for size of any of the state medical journals.

The editor has on hand a world of material from some of the greatest men in the profession waiting publication. The addition of 16 new pages each month will provide an outlet for this vast fund of medical information and will be greatly appreciated by the readers of the ILLINOIS MEDICAL JOURNAL.

THE EVOLUTION OF MEDICAL PRACTICE or WHAT AILS THE PROFESSION

The editor is repeatedly asked, "What Ails the Medical Profession," and this from men who formerly gave no thought to the great medical problems.

That something is wrong with the doctors' economic adjustment is manifest by the great unrest which exists among medical men. This is well exemplified by the agitation we hear repeatedly for a doctors' union to be affiliated with the Federation of Labor.

The drift towards organization which is the dominant note throughout the commercial world is becoming very evident among medical practitioners; for instance, in New York in three separate sections of the city and in fifteen up-state counties the effort to form a doctors' union has met with success as vouchsafed for by the press representative of the Bronx Physicians' Guild. Certainly this indicates a pronounced state of unrest and dissatisfaction among the physicians of New York. However, the disgruntlement among doctors is not confined to the Eastern metropolis, it is a burning question everywhere.

We wonder how many physicians can explain the cause of unrest—we wonder how many members of the profession realize the profound change coming over the relation of the physician to the community. How many physicians appreciate that the change in the status of the physician is largely but a phase of the recent extensive development of sociology?

Talk to the doctor who is practicing in a poor section of the city and ask him how business is and in nine cases out of ten he will answer you in language more expressive than polished. The tenth one because of pride or bluff will tell you

that business is fine or he may be laboring under the feeling that if it is bad his saying so will not remedy things.

Again, talk to the man who is recognized as being at the top of the profession, ask him if he is making as much today as he made ten, twenty or thirty years ago. Invariably he will tell you that he is feeling the pressure of conditions; ask any of these men the reasons and you will not get any two answers alike. The reason is because there is no one cause for it, but a variety of causes. The principal reason is that the doctor has built up and is still building up against himself an instrument of self destruction which he has the power to break and render harmless. The cause of the present conditions is that we have allowed others to think and act for us and we have become the passive agent in carrying out the ideas of others.

Let us study the signs of the times for a moment and see if there is any manifest reason for this dissatisfaction and unrest among physicians?

Diphtheria antitoxin has materially reduced sickness and mortality.

Typhoid fever, which was at one time a scourge, has reached the vanishing point.

Destruction of the mosquito has prevented malaria and yellow fever.

The control of plague is now an accomplished fact.

Improvement in the milk and water supply of cities has materially reduced morbidity from intestinal diseases.

By early recognition and hospitalization tuberculosis morbidity is being materially reduced due to the world-wide campaign of prevention.

Hook worm disease is now readily curable.

Puerperal fever is today as rare as it was formerly common.

Typhus fever no longer exists in America.

Scientific midwifery by dispensary physicians teaching dependency on state support.

Visiting nurses for ordinary sickness thus helping families to self medication.

Tenement house inspection preventing diseases due to overcrowding.

The Pure Food and Drug Law.

School inspection helping to eliminate infection.

The regulation and suppression of alcohol consumption.

The fashion for fresh air and outdoor sleeping.

The disposition to work along lines of prevention rather than cure.

The overcrowding of the profession caused by the lessening of morbidity.

The abuse of medical charity by hospitals and dispensaries is familiar to physicians and experience has cost them dearly.

The various forms of contract practice that are becoming firmly rooted and have reduced the fee for visits in the East to six and one-half cents.

Note the injustice heaped upon the profession by the Harrison Narcotic Law in placing a tax of \$450,000 a year on the profession for protecting the public—said law being a public health measure for the benefit of the public and for which the public should pay and not the doctor.

Note the after-the-war program of the Red Cross that having the money they proceed to carry on the socialistic scheme of taking over all extra governmental health agencies and immediately proceed to the regulation of everything and everybody gratuitously.

Note the after-the-war program of the United States Public Health Service in their attempt to duplicate the socialistic dream of the Red Cross and go them one better if possible.

How many physicians have not experienced unfavorably the enveloping tenacles of the insurance octopus? We doubt if there is a physician who has not within a year had under his care a surgical case of some nature and for which he has charged only a reasonable fee, and upon recovery an insurance company steps in as the representative of the patient and informs him that his charges are exorbitant and threaten him in various ways; that finally he has to accept the small pittance they see fit to give, otherwise he gets nothing.

On the other hand note the persistent trend of sociology to make the care of the sick the function of the state. Our present experience with the narcotic law has taught us that it is unsafe to attempt to treat an addict in private practice.

The Government deputies hounded physicians in an unbecoming manner, agents went so far as to lay bait and appeal to the humanitarian side of the physician and afterwards prosecute him because he was at least human. Some of the methods used by the government officials would be unbecoming even the worst shyster lawyer in the community.

To illustrate further the attempt at state con-

trol of medicine note the doctors' every day experience in the present day trend toward hospitalization of the contagious disease sick.

Note the free distribution and free (if requested) administration of antitoxin and serums.

Note the widely heralded campaign by the government and state for the free treatment of venereal disease.

Note the rapid growth and development of institutions like the Psychopathic, County and Municipal hospitals for the care of the sick but not necessarily poor. These are all operating to bring about the state control of medicine.

We have mentioned but a few of the factors effecting the profession unfavorably. We could go on almost indefinitely enumerating conditions that are developing to such an extent that they interfere with the future welfare of the physician.

To one who has watched the trend of the times it is clearly apparent that there is a well defined movement all over the United States and for that matter all over the world to impose many limitations on the practitioner of medicine. It is time that the medical men protest and show the public the nefarious and dangerous tendency of many of these regulations, otherwise in the near future a large number of laws are sure to appear on the statute books the purport of which will be to impair the usefulness of the practitioner and impose hardship and dangers upon the sick and suffering.

Unfortunately medical men do not concern themselves sufficiently with legislative matters even when their own rights and interests are involved. To summarize the whole situation "in the history of all medicine" there never was a time when the difficulties of the profession were greater than they are today.

UNIVERSAL MEDICAL RECIPROCITY.

The editor is in receipt of the following letter from a representative member of the profession:

To the Editor: I am enclosing a clipping of the October number of the *Medical Council*, which is of paramount importance to the medical profession.

I am informed that a similar bill has been introduced into the United States senate. I have not read the bill referred to but the principle is right.

Would it not be wise for the medical press of the country to enlighten the profession regarding

the bill and its present standing? If amendments are needed perhaps efforts on the part of the profession might secure them.

I have heard it said that our congressman is using his influence in behalf of some irregular cult. If this is true it need not necessarily prevent the regular profession endorsing and encouraging the passage of a national law which would permit doctors of good standing to practice medicine anywhere in the United States.

I understand this measure might not be agreeable to some of our state departments, but the profession desire the privilege and why not go after it.

The following are the provisions of the bill:

A BILL TO ALLOW PHYSICIANS TO PRACTICE MEDICINE IN ALL STATES

A Federal bill to allow physicians to practice in all States has been introduced by Representative Mason. It provides that any physician who has studied four years in a medical school and has been granted a State license, or any person admitted to practice medicine and practiced for at least five years may be granted a license to practice medicine in any state of the Union. The bill further provides that a fee of ten dollars be paid to the Secretary of the Interior and that the license issued be recorded with the Department of Health in the State where the physician practices. The bill has been referred to the House Committee on Interstate and Foreign Commerce for consideration. It bears the number of H. R. 8313.

The idea is very dear to the heart of the editor and for a number of years he worked in his meager way to bring about this ideal condition, but finally abandoned hope of accomplishing it because of legal limitations. As we understand it the constitution of the United States is a grant of power by the several states. That which is not granted by it is reserved to the several states. There is no provision in the constitution of the United States which gives power to Congress to control internal or intra-state problems, such as licensure of physicians, however wholesome the result may be believed to be. Oversight by the Federal Government of operations in slaughter houses, etc., rests, not upon the fact that the health of the public is affected, but upon the fact that the product is designed to be transported inter-state, as an article of commerce. The practice of medicine is not an activity of commerce, although traffic in drugs is. The bill introduced into Congress, as the same is reported, being an act to license physicians practicing in one state to practice in another state of the Union without

consent of the latter state is claimed by the best legal minds to be beyond the powers of Congress, and if enacted, would be a nullity. It would seem then that the best solution of the problem would be for a general reciprocity agreement between the various state boards of health. The problem is not a difficult one if worked out along these lines and while there has been some constructive work done towards solving the reciprocity problem, it has not progressed with the desired rapidity.

Now that the war is over let us hope that the matter will be pushed to a satisfactory speedy conclusion.

CHICAGO SOCIETY OFFERS PRIZE FOR THESIS

In 1896 in the first radical operation for carcinoma of the cervix by Ries, certain lymph-nodes were removed, on examination of which gland-like structures hitherto undescribed were discovered by him. These findings have since been confirmed and pictured by other authors. Robert Meyer claims that these structures are due to irritation of the endothelium of the lymph sinuses by infectious material absorbed from the ulcerated carcinoma.

It is desired that this claim be further investigated, and the following points are tentatively suggested for examination.

1. Do all infected carcinomas produce such gland-like formations in the regionary lymph-nodes? (for inst., ulcerated carcinomas of stomach, rectum, lips, breast).

2. Are closed, non-infected carcinomas ever accompanied by similar formations? (for inst., closed carcinomas of breast).

3. Do infected lymph-nodes not associated with carcinoma, as for instance with primary sclerosis, soft chancre, infected wounds of the extremities, present similar structures?

4. Can the structures be produced experimentally?

For the most satisfactory solution of this problem a prize of one hundred dollars has been deposited with and will be paid by the Treasurer of the Chicago Pathological Society upon the decision of the Prize Committee. Professors Hektoen, Zeit and LeCount have consented to act as committee.

The competing essays must be in the hands of

the Secretary, Dr. George H. Weaver, 629 South Wood street, Chicago, or his successor in office, by September 1, 1920, bearing some number for identification. A sealed envelope bearing the same number and containing the name and address of the essayist is to be inclosed.

The winning essayist will be invited to present personally the result of his investigations at the first meeting of the Pathological Society in October, 1920.

If no essay is offered in competing for this prize at the expiration of the above term, the amount shall be returned to the donor.

THE PRINTERS' STRIKE IN NEW YORK

We extend to our brother doctors in the East our sincere sympathy because of the strike that has tied up many of our largest and most influential medical journals. It is considerable of an affliction for the progressive doctor to have to be deprived of the pleasure of enjoying an evening with his favorite medical journals. Let us hope that this deprivation will only be of a temporary character.

As we understand it the worst printers' strike in the history of printing is on in the City of New York.

That the forces, working on the respective medical journals, in sympathy with over ten thousand of their fellow printers, walked out without an hour's notice, placing the medical journals in such a position that current issues have been delayed.

Medical journals however, are only a few of over two hundred publications that are affected.

We ask our readers for their kind indulgence in this situation which our brother publishers in the East are powerless to control.

CREDIT WHERE CREDIT IS DUE.

DR. VORONOFF AND HIS DISCOVERY OF SEX GLAND IMPLANTATION.

Last month our public press by large front page headlines and accompanying picture of the alleged finder, heralded a supposed discovery of sex gland implantation for the cure of old age and other evidences of senility by one Dr. Voronoff of Paris, France.

According to the public press, Dr. Voronoff has made some remarkable "discoveries" in the matter of sex gland implantation. As his al-

leged discovery is merely a repetition of a fragmentary part of what Dr. G. Frank Lydston of Chicago laid before the profession nearly six years ago, and which he has since elaborated in both the medical press and in book form, we would suggest that our Parisian friends would better try to "discover" scientific America. If the profession of Europe has not been in profound coma since long before the war, Voronoff will not get away with his wonderful re-discovery of the already discovered. In passing, we hope that the American press may sometime discover the American doctor. Even Uncle Sam, slow as he is, recently discovered the American doctor. Why should the press lag behind? In the case in point, Dr. Lydston's "right of discovery," not only in the matter of sex function, but affects on skin, circulation, arterio-sclerosis and other conditions will not be challenged by any American physician who has kept in touch with medical science since January, 1914. Without attempting to go into the literature of the subject of sex gland implantation, the writer states that in his opinion the *Bulletin of the Chicago Medical Society* for March 7, 1914, the columns of the *New York Medical Journal* from March to December, 1914, various articles since appearing in the *Journal, A. M. A.* and Dr. Lydston's Monograph on Impotence, Sterility and Sex Gland Implantation (which appeared in 1917) should be sufficient to bring Dr. Voronoff back to earth.

In this connection should be recorded the work of Dr. Victor D. Lespinasse in 1911, reported before the section of Genito-Urinary Diseases of the American Medical Association in June, 1913, and published in the *Journal, A. M. A.*, November 22, 1913, under the title "Transplantation of Testicle."

INSURANCE COMPANIES SEE THE LIGHT.

THE NATIONAL UNDERWRITER.

Chicago, Sept. 20, 1919.

To the Editor:

I was interested in an editorial in the September issue of the ILLINOIS MEDICAL JOURNAL in which some very severe castigations are made on the insurance companies in their attitude toward physicians that render first aid. I wonder if you could not write us your views on this subject, going a little more into detail. It seems to us

that if conditions are such as the editorial indicates the insurance companies should understand the feelings of the medical profession in this regard. We believe that this position of the medical profession should be made public.

Yours faithfully,

C. M. CARTWRIGHT,
Managing Editor.

FROM THE SUBLIME TO THE RIDICULOUS AND THE STATE DEPARTMENT OF INEFFICIENCY.

The following is self-explanatory.

STATE OF ILLINOIS

DEPARTMENT OF REGISTRATION AND
EDUCATION

SPRINGFIELD

FRANCES W. SHEPARDSON, DIRECTOR

E. A. WREIDT, ASSISTANT DIRECTOR

F. C. DODDS, SUPERINTENDENT OF REGISTRATION

September 17, 1919.

Dr. W. H. Gilmore,

Illinois State Medical Society,

Mt. Vernon, Ill.

Dear Doctor: Your letter of the 12th inst. to the Department of Health has been referred to this department.

In reply you are advised that no official register of physicians has been published by this department. On account of the many changes which have been made by physicians during the past two years, occasioned largely by their entrance into the service and by locating in new places upon their return, it will be almost impossible under present conditions to publish a register which would be at all accurate.

Unfortunately the Medical Practice Act of this state does not provide for the annual renewal of physicians' licenses. If this were a requirement, the issuance of an official register would not be a hard matter.

Very respectfully,

F. C. DODDS,

Superintendent of Registration.

NOTE: In signing the above effusion the superintendent of registration brands not only himself, but the department as either lazy or incompetent, or both.

.....

In commenting upon the above the writer knows from personal observation and experience that it is possible to compile and to keep a reasonably accurate directory of the physicians of

Illinois. When Dr. Egan and later when Dr. Drake was secretary of the old State Board of Health we had a reasonably up-to-date physicians' directory and this long before we heard of the departments of Efficiency and Economy or the present wrongly named Department of Registration and Education.

We know from experience that under an annual registration law or any other system of recording no directory can be absolutely accurate, for even though every physician in the state should be properly accounted for, with his correct address, on a given registration date, by the time the register is compiled and published hundreds of physicians will have moved and some would have died and the register will be inaccurate in that extent at least.

With the assistance of a selected lot of physicians residing in important centers of population and the help of the secretaries of the County Medical Societies, the old State Board of Health was always able to develop a fairly complete list of physicians. By checking this against the A. M. A. directory, city directories, and newspaper clippings recording the deaths or movements of physicians, and against all the correspondence received from physicians at the Board of Health office—this including the two letters of recommendation filed with each application for licensure the old State Board of Health was able to give us a very complete register.

We are willing to wager that an up-to-date registration of practically every physician in Illinois can, at this writing, be found with the State Department of Public Health where the affairs are not being administered from a dream book and where efficiency is the rule and not the exception.

Verily, verily, I say unto thee, that all the inefficiency in public life is not centered in Washington, D. C.

WHERE NOTHING IS IMPOSSIBLE BUT VIRTUE or EVE'S VIEWS ON PARIS.

"Where sex is the keynote of existence.

Where many women 'toil not, neither do they spin, yet Solomon in all his glory was not arrayed as one of these.'

Where women ponder not what they shall wear, but how much,

Where the American pays the fiddler while Paris dances.

Where titled people meet in studios, tell what great

men their grandfathers were, and then whisper: 'Lend me five francs.'

Where wit is only recognized when it has a risqué turn.

Where life is one mad maelstrom with an under-current of mirth.

Where wives support their husbands in various ways. Where suffrage is replaced by cooking schools.

Where the marriage tie means freedom.

Where wine, women and song are the three ruling muses.

Where nobody throws stones, for all live in glass houses.

Where marriage is merely a matter of law and where love is merely a matter of form.

Where a man and woman may suddenly announce: 'We are one and

Society answers: 'Entrez, s'il vous plait.'

Where vanity was born and never left home.

Where music halls bear the unwritten invitation: 'Take your choice.'

Where nothing is impossible but virtue."

—By Sophie Irene Loeb, in the *Chicago Journal*.

O tempora! O mores! Certainly a severe castigation of the grand French people. Can it be possible that the one time God-loving French have thrown all discretion to the winds? That there no longer exists in Paris the ideals of life and living that make existence worth while? Can it be true that vanity, lust, and immorality have driven out from the fashion center of the Universe everything that appeals to the finer instincts of Christian people? If it is true and Paris is hereafter to represent not only the fashions, but the morals of the world, then France is not helping to make the world safe for democracy nor is the Bolshevik movement the only menace to the future security of mankind.

THE PHYSICIANS' STRIKE.

The suggestion of a physicians' strike has usually been a facetious one. There are times, however, when even the ever patient physician becomes irritated. The *Medical Press*, London, contains the following comment relative to a recent labor agitation in Yorkshire:

Correspondence in the local journals shows that the outpatient staff of the General Infirmary at Leeds are refusing treatment to the miners on strike. When two miners attended at the outpatient department, the medical officer on duty informed them that he was on strike too. Subsequently he offered to prescribe for them, but this offer they refused, on the grounds that they had been insulted. The miners, of course, have

stated their grievances in the local press, and the correspondence has grown, partly in sympathy with the miners' complaints, partly alleging that retaliation must be expected in view of the hardships the miners have brought upon the public. Meanwhile the aggrieved miners, having asked for an inquiry into the conduct of the medical staff, the secretary of the infirmary has intimated that the committee will concede the request. The incident in question is an exceptional one, and we may believe without precedent. But the miners have only themselves to blame for its occurrence. Their unlicensed attitude in regard to their work having called forth general public indignation, accompanied by hardships from which they themselves are free, it is natural that resentment against them should take an active form, just to remind them that the game they play can also be played by others. A medical man with no coal in his house because the miners have refused to work, can hardly be expected to regard with any degree of effusive complacency, miners on strike who gratuitously seek his aid at a hospital. Medical men are not exclusively humane; they are also human like other people. —*Jour. A. M. A.*, October 18, 1919.

AN APPEAL FOR HUMAN EMBRYOLOGICAL MATERIAL

WILLIAM W. GRAVES, M. D.

ST. LOUIS

In 1906 I observed certain malformations of the human shoulder-blade, and in contributions to current literature I have given them the collective name—"the scaphoid type of scapula," and pointed out some of its hereditary clinical and anatomical significance.

Probably the most important observation connected with this type of scapula in man is its age incidence, that is to say, it occurs with great frequency among the young and with relative infrequency among the old. There appear to be two possible explanations of this fact:

Either—

A—One form of shoulder-blade changes into the other during development and growth.

Or—

B—Many of the possessors of the scaphoid type of scapula are the poorly adaptable, the peculiarly vulnerable, the unduly

disease susceptible—the inherently weakened of the race.

I have attempted to answer these questions by seeking evidence in various directions and one of the most important of these has been a study of intrauterine development of shoulder-blades. My investigations in this direction have been limited by the material at my disposal, which has been inadequate for a definite solution of this phase of the problem. I am, therefore, appealing to physicians for fetuses in any and all stages of human development.

It is desired that the material, as soon as possible after delivery, be immersed in 10 per cent formalin in a sealed container, and be forwarded to my address; charges collect. Due acknowledgment will be made to those forwarding material.

727 Metropolitan Bldg.

Public Health

STATE DEPARTMENT OF PUBLIC HEALTH AT A. P. H. A. MEETING

The State Department of Public Health was represented at the meeting of the A. M. P. A. at New Orleans by Dr. C. St. Clair Drake, Director; Dr. George Thomas Palmer, Assistant Director; Dr. Clarence W. East, Chief, Division of Child Hygiene and Public Health Nursing; Mr. Paul Hansen, Chief, Division of Sanitation and Engineering, and Dr. H. B. Hemenway, District Health Officer.

At a conference held in connection with a meeting of the Association to establish definite co-ordination of governmental and extra-governmental health organizations, including the National Organization of Public Health, the American Red Cross and the National Tuberculosis Association, Dr. Drake represented the State health officers as Executive Secretary of their national organization, and Dr. Palmer represented the National Tuberculosis Association.

ENGINEERING ACTIVITIES

The Division of Sanitation of the State Department of Public Health has just concluded investigations of the water supply of Duquoin, Perry County, and has submitted recommendations to the public officials for the establishment of safer and larger water supplies.

Duquoin is one of the relatively few Illinois cities having a definitely polluted water supply, and one which will soon become inadequate to meet the needs of the community. Pending the installation of new water works, the State Department of Public Health has recommended the sterilization of the city water for the protection of strangers and other persons unfamiliar with local conditions.

Investigations of the sewage disposal system of

Carbondale, Jackson County, by the Division of Sanitation, indicates the necessity for an entire rearrangement of the sewer system and the installation of two systems of mains—one for the disposal of household sewage and other putrescible wastes, and the other for drainage of streets and roofs.

The installation of the Carbondale sewer system without a definite plan for future needs and the disposal of storm water in the same mains with offensive sewage, trends to the development of serious sanitary conditions.

HOSPITAL FOR RETURNED TUBERCULOUS SOLDIERS

On account of the large numbers of returned soldiers requiring institutional care and the crowded condition of most of the general hospitals and tuberculosis sanatoria in Illinois, a special hospital has been established in Springfield. This institution offers an immediate capacity of thirty-two beds and will be operated under the same medical and nursing service as that of Springfield Open Air Colony.

This new hospital, known as the "Homestead," occupies the home of the late Stephen T. Littler, which is located in the central part of the city, but surrounded by a large tract of land which under the provisions of a will cannot be disturbed for a long period of time.

The "Homestead" will be used primarily for returned soldiers, but will ultimately become the hospital section of the Springfield Open Air Colony.

PUBLIC HEALTH NURSING SERVICE

Miss Etta Lee Goudy, recently connected with the Bureau of Public Health Nursing of the Central Division of the American Red Cross, has been appointed Supervising Nurse of the Division of Child Welfare and Public Health Nursing of the State Department of Public Health with headquarters in Springfield.

Miss Ann L. Tillinghast has been appointed Acting Supervisor of Nursing Service for the Illinois Tuberculosis Association, with headquarters in Springfield. Miss Tillinghast served with the Chicago Visiting Nurses' Association and was engaged in general community nursing at Chicago Heights. She was the first superintendent of Edward Sanatorium, at Naperville, and later of the Open Air Colony at Springfield.

Miss Emily Fisher, recently discharged from army service at Fort Sheridan, has assumed charge of the county nursing service in Randolph County.

SENSATIONAL VACCINATION STORY

The newspapers of Springfield a few weeks ago published a sensational story of a child whose vision had been impaired by smallpox vaccination.

This alleged condition was said to be the claim for damages by the parents of the child.

The story was said to be supported by Dr. John F. Deal, a prominent physician engaged in eye, ear, nose and throat work. When the case was brought

to the attention of Dr. Deal an emphatic denial was issued in which it was stated that Dr. Deal had had no knowledge that the child had been vaccinated, that he had expressed no opinion as to the condition of the child's sight, and the condition was one which could in no way be associated with vaccination.

INVESTORS' DEPARTMENT

THE RAILROAD SITUATION

Transportation is the biggest business in the country and the most important question before Congress. It must be put upon a paying basis as every business should be—common sense demands it—business demands it—the public demands it.

There is no factor in our welfare which bears the intimate, inseparable and continuous relation to our daily life as this complex, nation wide service, financed and fostered through private enterprise. Contemplate for a moment if the railroads failed to function and you will be forcibly impressed with the fact that transportation is a basic necessity of our very existence. It is obvious, therefore, that transportation will continue to be provided either by the Government or by private capital. If by the former, railroad obligations will in effect receive an endorsement which will be equivalent to a guarantee; and if operated by private ownership, then adequate rates must be granted which will pay operating expenses, fixed charges and a fair return on the value of the property.

Discussions of the railroad situation in Congress, together with a practical demonstration of Government operation, has developed a disposition to deal in a spirit of fairness with the final adjustment of the railroad problem; and we are convinced that when the roads are returned to their owners they will be given such protection, and their position so clearly defined, as will re-establish their credit and enable them to finance themselves for all future requirements through the issuance of their own securities, as they have in the past.

Should the Government take over the railroads permanently there would certainly be no question as to the safety of outstanding bonds of railroads that are not over-capitalized; and if private capital is to operate them as heretofore, then the legislation to be enacted must provide not only for payment of interest upon outstanding obligations, but a return on the stock up to the

valuation placed upon the property by the Interstate Commerce Commission, which under the Cummins Bill is $5\frac{1}{2}$ per cent. There are many of the larger properties where the present value is more than the book value, and on this higher valuation the guaranteed return of $5\frac{1}{2}$ per cent would be predicated.

The logical conclusion from this situation is that railroad bonds as a class are now selling far below their real value. Recent advances have indicated an appreciation of this fact. Railroad bonds probably represent in the aggregate more capital than invested in any business or industry in the world, and these bonds are owned by individuals, savings banks, insurance companies and trustees who have purchased them in good faith, and in the case of savings banks, under restrictions and qualifications prescribed by state laws.

Therefore, if you believe the railroads should be given a square deal, and if you believe in the efficiency of private management, you can as members of one of the world's leading professions, use your wide influence to secure a just and prompt settlement of this problem by urging your representative in Congress to work for a settlement during the present session.

The President has stated that the roads would be returned to their owners by January 1, 1920, but it is inconceivable that such action will be taken unless a comprehensive bill is passed as a basis for future rates and financing.

FINANCIAL.

Announcement is made that the Patchogue Manufacturing Company of Patchogue, Long Island, and Plymouth Mills of Lawrence, Mass., are to be consolidated under the name of Patchogue-Plymouth Mills Corporation, with a capital stock of \$1,500,000 8 per cent preferred stock and 30,000 shares common stock, without par value.

The Patchogue company was established in 1894 and manufactures curtains, nets, laces and conducts the largest bleachery for fine embroideries in the United States.

The Plymouth Mills company was established in 1905 and are manufacturers of wool and fibre rugs, matings and floor coverings.

Both companies are controlled by the Einstein Wolff interests, and all the preferred stock has been purchased by Merrill, Lynch & Co., bankers, New York.

The Doctor—"I had a great many more patients this time last year; wonder where they have all gone?"

His wife—"We can only hope for the best dear."

Society Proceedings

CLARK COUNTY

The Clark County Medical Society met at Dr. Hall's office in Westfield, September 11, 1919, at 1:30 p. m. Seven members were present and one visitor.

Dr. Joseph Hall read a paper on "Diabetes Mellitus, Etiology and Treatment." The paper was discussed by all present.

Dr. Hinkley reported a fatal case of diabetes following a fracture.

Dr. Anderson thinks he gets the best results from the gold and arsenic bromide treatment.

Dr. Houser reported a case which always showed a high specific gravity with sugar at times, and thought she secured the best results from carefully regulated diet.

Dr. Marlowe and Dr. Lee both emphasized diet in the treatment of this disease.

Dr. Brunker gave his experience with diabetes while in service, disapproving of the opiate treatment.

The paper was heartily received and thoroughly discussed.

L. H. JOHNSON, Secretary.

The October Meeting

The Clark County Medical Society met at Casey, Thursday, October 9, at 1:30 p. m. Ten members were present.

Several clinical cases were reported.

Dr. Lee reported a case of hemiplegia in a patient 16 years old coming on immediately following the execution of high notes on a cornet, which he thought was the possible cause.

Dr. Weir reported a case of hemiplegia or rather an apparent hemiplegia which soon cleared up entirely.

Dr. Houser reported a case of neoplasm of the lung, which was unusual, but very interesting.

Dr. Hall and Dr. Boyd reported cases of extreme nervousness following influenza.

These cases were discussed as to care and treatment and several good points were picked up by all present.

Dr. Lee read a paper on "Typhoid Fever," carefully covering the subject in a masterly way. The paper was discussed by all members present. This disease was branded as a badge of disgrace on the community in which it occurs.

The secretary was instructed to again take up the matter of E. M. Sparks with John W. Follmer of the State Board of Education and Registration.

L. H. JOHNSON, Secretary.

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, October 8, 1919

1. Trichomonas Vaginitis. Diagnosis and Treatment: Joseph B. DeLee.

General discussion.

2. The Chemical Identification of the Active Constituent of the Thyroid with a Discussion of its

Physiological Function. E. C. Kendall, Rochester, Minn.

Discussion: Prof. A. J. Carlson.

Regular Meeting, October 15, 1919

1. Percutaneous Puncture of the Vas. An Excellent Treatment for Chronic Gonorrheal Seminal Vesiculitis, with the Demonstration of Instruments and Lantern Slides. Victor D. Lespinasse.

Discussion: Wm. Belfield, B. C. Corbus, Robert Herbst, L. E. Schmidt.

2. Surgery of the Duodenum. A. J. Ochsner.

Discussion: Chas. L. Mix.

3. Mental Sanitation. George F. Butler.

Discussion: Julius H. Grinker.

Regular Meeting, October 22, 1919

1. A Plea for the Rectal Examination During Labor. David Monash.

Discussion: Jos. B. DeLee.

2. Diabetes Insipidus. A. A. Goldsmith and Don C. Sutton.

Discussion: A. B. Yudelson.

3. The Modern Treatment of Severely Infected Fractures. Illustrated with Lantern Slides. Dennis W. Crile.

General discussion.

Regular Meeting, October 29, 1919

1. Focal Infections of the Genito-Urinary Tract. (Lantern slides). Charles M. McKenna.

Discussion: Gustav Kolischer, Irvin S. Koll.

2. Moving Picture Demonstration of the Wassermann Reaction. C. E. Roderick, Battle Creek, Mich.

3. The Surgeon and the Consumptive. Ethan Allen Gray.

Discussion: Max Biesenthal.

CHICAGO NEUROLOGICAL SOCIETY.

The regular monthly meeting of the Chicago Neurological Society was held jointly with the West Side Branch of the Chicago Medical Society at the Psychopathic Hospital on Thursday evening, December 19, 1919. Clinical meeting.

In the absence of the president, the vice-president, Dr. Herman Campbell Stevens, presided.

PRESENTATION OF CASES.

1. LESION OF BRACHIAL PLEXUS. PRESENTED BY DR. S. KRUMHOLZ.

The patient was a man aged 21 years, Austrian, a laborer by occupation. Nothing in the previous history had any relation to the present trouble; no alcoholism or lues.

On July 1, 1918, he received an injury by falling to the ground from a scaffold at a height of fifty feet. He remained unconscious for five hours. On regaining his senses it was found that he suffered a number of contusions and his right arm was paralyzed. This paralysis had persisted since the accident, and he complained of constant pain over the thumb and index finger.

On examination the patient presented a complete flaccid paralysis and wasting of the right arm, with the exception of slight motion in the fingers. He

could shrug the shoulders, this movement being performed chiefly by the supra-spinatus and the rhomboideus. Both scapulae were on an even line; there was no displacement of the inferior angle of the scapula and no winged appearance of the back on the affected side, showing that the serratus magnus was not paralyzed. The triceps and biceps reflexes were absent. Sensory disturbance was present over the entire radial side of the arm, palm, thumb, and radial side of index finger. The cranial nerves were normal. There were no ocular changes; that is, no pseudoptosis, no contraction of the pupil on the affected side, no narrowing of the palpebral fissure, no anophthalmos.

2. LESION OF BRACHIAL PLEXUS. PRESENTED BY DR. S. KRUMHOLZ.

The patient was a man aged 34 years, American, single, a laborer by occupation. His previous history was negative.

On July 13, 1918, he fell from a racing car while standing on the running board. He regained consciousness after nine hours and found the left arm paralyzed and this paralysis had persisted since that time. Four weeks after the injury he complained of neuralgic pains in the arm.

Examination: There was no motion in forearm and wrist; he could move deltoid not quite to a right angle; shrugged shoulders quite well. The arm was atrophied; there was no sign of serratus magnus paralysis; the triceps, biceps and wrist reflexes were absent. Reflexes normal in other extremities. There was anesthesia of the arm, except for an area extending over the inner border of the upper two-thirds. The cranial nerves were normal. Horner's syndrome was absent.

In considering the diagnosis in traumatic, as in other nerve lesions, the chief difficulty lies not in the detection of the lesion, but in the determination of its seat. For the purpose of localizing the lesion the speaker favored Frazier's method of dividing the plexus into three portions. First, the intravertebral portion, which contained the separate anterior and posterior roots within the dura; second, the intervertebral portion, where the roots leave the spinal canal enclosed in a separate sheath of dura and the spinal ganglia lie in the intervertebral foramina; third, the extravertebral portion comprising that portion of the nerves from the intervertebral foramina to a point where they unite to form the various trunks.

In extravertebral lesions, the symptoms depend on whether the nerves are injured distal or proximal to the point at which branches are given off to the serratus magnus and rhomboideus, or still lower down to the supra-or infraspinatus muscles.

In these cases none of these muscles were affected; there was no displacement of the inferior angle of the scapulae, and no so-called "winged" appearance of the back; likewise, the ocular symptoms shown by Horner's syndrome were absent. Therefore it must be concluded that we were dealing with extravertebral lesions of the brachial plexus.

In the treatment of these cases surgical interference was indicated when there was no diminuation of the paralysis at the end of three or four months, and in the opinion of the speaker the operation ought to be performed immediately after the injury, followed by massage, etc. The operation should be an end-to-end anastomosis of the nerve, or an aut fascial tubulization.

In Case 2, about four weeks after the injury, the patient had intense, intermittent, darting, neuralgic pains, which, according to Frazier, can be relieved by section of the posterior roots. This case was operated on the 6th of December, at which time cicatricial tissue was removed.

Dr. George W. Hall brought out an interesting and unusual finding in Case 1, showing that the affected shoulder was higher than the unaffected, although the trapezius was not involved.

DISCUSSION.

Dr. SIDNEY D. WILGUS asked whether the anesthesia could be explained on the ground that the posterior roots were damaged, the motor disturbance being due to injury of the trunk.

Dr. H. C. STEVENS asked whether fibrillary contraction of the muscles was observed during the course of the atrophy.

Dr. H. J. SMITH asked what the findings were at operation.

Dr. S. KRUMHOLZ (replying) stated that in Case 1 the surgeon's record showed that a lesion was found in the lower part of the brachial plexus, one-half to one inch above the upper part of the clavicle, the distal portion being connected with the proximal cord by fibrous tissue imbedded in the scalenus anticus muscle. The distal nerve was located readily, the proximal with difficulty. The cords were not severed but the connections were left, after removal of the scar tissue.

In Case 2 the surgeon's record showed degeneration of the nerve trunk and scar tissue. This scar tissue was removed, which was all that could be done at the time.

It was possible that the posterior roots in Case 2 were torn, with an intradural lesion of the fifth and sixth servical and also a lesion of the trunk. An exploration of the plexus and a laminectomy were advisable. Such an exploration might reveal reparable nerve bands, while the laminectomy would reveal such an injury, and the section of the posterior roots might stop the neuralgic pains.

No fibrillary twitchings had been observed.

1. PROBABLE CEREBELLAR TUMOR. PRESENTED BY DR. GEORGE W. HALL.

The patient was a man aged 30 years, a laborer, Syrian, married, who denied venereal disease. He complained of dizziness, disturbed vision, marked weakness of the lower extremities and disturbance in speech, and claimed that these symptoms appeared in August, 1918. About five o'clock, when coming home from work he noticed impairment of vision which lasted for a few moments. Half an hour later there was a similar attack and vision had been impaired constantly since that time. Two weeks prior to this onset he had complained of severe headache. He did not remember the exact location but thought it most likely in the frontal region. The headache was accompanied by dizziness, and this had been persistent since the impairment of vision. He could not walk on account of weakness and dizziness. He was so weak he could not hold a spoon.

Examination revealed a marked bilateral nystagmus, coarse and more marked toward the right. Vision

right eye, 6/200; left, 5/200. Discs slightly pale; no evidence of choked disc. There was also slight disturbance in speech; syllables were not sounded very well. The reflexes were very brisk in both upper and lower extremities. No sensory disturbance, no Babinski, no ankle clonus. He could touch the nose with the finger fairly well with the left hand, there was no evidence of intention tremor but some evidence of ataxia in the right upper extremity. Ataxia of the lower extremities was more pronounced and right was worse than left. There was no disturbance of the muscle sense as contrasted with ataxia of spinal origin. There was no sensory disturbance, no disturbance of heat and cold sense. There was no bladder disturbance. He complained of external objects going to the left; although his body did not appear to move toward left or right.

These findings together with the reeling gait, the nystagmus, marked disturbance of vision, headaches and the onset made possible a diagnosis of a lesion in the cerebellum perhaps extending a little more to the right than to the left of the vermis. He had a tendency to fall backward rather than sideways so the lesion was probably in the vermis of the cerebellum rather than in the left lobe. In wrist movements there was better power over the left than over the right. The sudden onset was difficult to explain, but possibly a growth of a gliomatous nature could give this sudden onset on account of a hemorrhage around the growth. Such patients often have slight attacks of paralysis which clear up and subsequent autopsy shows evidence of hemorrhage. The chief point which spoke against its being a tumor of the cerebellum was the absence of choked disc, but this sometimes occurred. The Wassermann was negative both on the blood and spinal fluid. The fluid showed fifteen to twenty cells with a slight Ross-Jones reaction. The intraspinal pressure was normal. No Abderhalden test had been made. Gordon reflex and Oppenheim were absent.

DISCUSSION.

Dr. PETER BASSOE asked if it was possible that the poor vision and pale discs might be due to secondary atrophy, and whether the outlines were perfectly clear? It might mean that he had had an optic neuritis, not very severe, and that suggested that there might have been a time when pressure was much higher than now. They might be dealing with a tumor of the fourth ventricle rather than of the cerebellum proper. Many such tumors gave cerebellar tumor symptoms. It was characteristic of these growths that they might cause sudden pressure symptoms; a sudden hydrocephalus might account for the sudden onset. Such a tumor might exist for a long time without symptoms. Another thing in favor of this diagnosis was the increased cells and globulin, which was very common in ventricular tumors and more frequent than in pure cerebellar tumors. If it was a ventricle tumor one might expect increase of headache and dizziness in changing the position of the head. This was sometimes true of cerebellar tumors but was more constant with ventricular growths.

Dr. HALL replied that the Barany test showed nystagmus lasting about 22 seconds on each side. The chief things which attracted him were the unilateral character of the symptoms, more marked upon the right than upon the left. Another thing which was quite characteristic of cerebellar lesions was the ataxia which was so much more marked in the lower than in the upper extremities.

2. TRANSVERSE MYELITIS SHOWING
BEEVOR'S SIGN. PRESENTED BY DR.
GEO. W. HALL.

This patient was a man who had a syphilitic transverse myelitis in the 12th dorsal region showing a beautiful Beevor sign.

(Demonstrated marked movement of the umbilicus upward by having patient raise his head from the pillow.)

3. PROGRESSIVE MUSCULAR ATROPHY.
PRESENTED BY DR. GEO. W. HALL.

The patient was a man, a teamster by occupation. Marked fibrillary twitchings were present in the muscles of the back and upper extremities. No sensory disturbances, no lues. The onset was gradual, beginning in the right arm and then extending into the left arm. There was marked weakness as well as atrophy of the muscles of the shoulder group and atrophy of the muscles of both hands, a little more marked in the right. There was no Babinski, no stiffness or spasticity of any kind, in the lower extremities.

With the gradual onset in one arm gradually extending to the other a diagnosis of progressive central muscular atrophy had been made.

4. AMYOTROPHIC LATERAL SCLEROSIS.
PRESENTED BY DR. GEO. W. HALL.

This patient was a man with marked spasticity, walking on toes. No history of lues. There was marked atrophy of the muscles and fibrillary twitchings in the upper extremities. The upper extremities were much the same as in Case 3, but the marked spasticity in the lower extremities showed involvement of the lateral column of the cord in addition to the anterior cells. The symptoms had existed for a year and a half and the two cases could be classified as the same disease. Amyotrophic lateral sclerosis and progressive muscular atrophy were different types of the same disease and if one of the cases was possibly a multiple sclerosis it was certainly of the amyotrophic type. The Babinski sign was very pronounced but the spasticity was so great it was difficult to demonstrate it. Oppenheim's sign was not present and there were no sensory disturbances.

5. SYRINGOMYELIA. PRESENTED BY DR.
GEO. W. HALL.

The patient was a man who presented atrophy of the tongue which was seen much better when the tongue was held back in the mouth. Fibrillary twitchings were present and marked on the right side only. The patient also showed evidences of sensory disturbance, the pain sense being much less marked on the left than on the right side. The disturbance extended upward to some extent and involved the region of the fifth nerve on the opposite side from the atrophy. The same area showed complete loss of temperatures sense. As there was the disturbance in sensation in addition to the findings in the other cases so a diagnosis of syringomyelia had been made. No trophic disturbances were present as yet.

These three cases were presented to show the forms

of atrophy that might occur and the differences between them. In Case 4 there was a pyramidal tract involvement, while in Case 5 the involvement was more centrally located, involving the pain and temperature fibers as they crossed over to the opposite side. There was a thickening of the vocal cords which accounted for the change in voice; there was no paralysis, the cords moving normally.

Such cases were not very amenable to treatment. If it was decided that the lesions were of toxic origin, as often happened in organic changes in the spinal cord, efforts would be made to remove the infection and prevent additional trouble. The destruction that had already occurred, of course, could not be overcome.

DISCUSSION.

DR. PETER BASSOE asked regarding X-ray treatment, stating that in syringomyelia they were dealing with an overgrowth of glia and gliomatous growth with caries formation, and it was known that the X-ray had an effect in inhibiting the growth of many kinds of tissues, such as upon lymph glands and in proliferative changes in the skin, and it seemed reasonable to suppose that if the X-ray could be brought into use it might have an effect in checking the symptoms. No destroyed fibers could be restored but it might diminish the growth of the glia. This treatment had been used especially in France for about ten years and there had been quite favorable reports. The speaker had used it in a few cases of syringomyelia and in other cases of tumors affecting the spinal cord and believed it exerted some influence. He thought it was worth trying, particularly because of the futility of the other known methods of treatment.

DR. HALL stated that syphilis could produce symptoms exactly like these but this disease was not present in these cases. He felt that multiple sclerosis as well as changes of this character in the central nervous system could be produced by some focal infection. He felt sure that clinically he had seen cases that could be traced back to the teeth, tonsils, or sinuses as the origin of changes in the spinal cord. Some cases of muscular atrophy where there was no positive history of syphilis were nevertheless proved to be due to that disease. The Wassermann could not always be depended upon in cases of tumor of the cord or brain. A positive Wassermann reaction was sometimes obtained on the blood where no syphilis was present while on the other hand, cases of tabes sometimes gave negative Wassermann findings.

DR. A. W. ROGERS asked what the prognosis was in the case of transverse myelitis.

DR. HALL replied that he did not consider it good. He had been under very thorough treatment for several weeks without any improvement.

DR. PETER BASSOE stated that the man had received treatment for syphilis before there was any nerve involvement at all. The total paralysis developed within ten to fifteen minutes while the patient was in the Presbyterian Hospital being treated for a burn.

DR. H. C. STEVENS suggested that the cause of the atrophy of the tongue was the incessant action of the fibrillary contraction of the muscle fibers. The contractions continue throughout the whole period of atrophy and disappear with the regeneration of the nerve. The contractions occur not only in central lesions but in peripheral nerve lesions as well. There was not much justification for the theory of a trophic influence of the nerve on the muscle. In attempting to find a treatment for muscular atrophy it had occurred to him, following some experimental work, to attempt the injection of calcium, barium and magnesium, salts. This was done on guinea pigs after section of the sciatic nerve. Certain of the operated animals were treated with subcutaneous injections of salts known to have a sedative effect upon muscular activity. Other operated animals were used as controls. The weights of the gastrocnemius muscles in the treated and non-treated animals were compared to determine whether the salts injected retarded the rate of muscular atrophy.

CHICAGO OPHTHALMOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Ophthalmological Society was held on Monday evening, February 17, 1919, with the president, Dr. William L. Noble, in the chair.

FUNDUS PATHOLOGY WITH THE RED-FREE LIGHT OF VOGT

Part 1. A New Symptom of Retinal Atrophy.

Part 2. Macular and Foveal Changes.

Dr. Robert Von Der Heydt read a paper on this subject, in which he stated that in the normal fundus the red-free light gave the first absolute demonstration of the yellow coloring at the macula in the living eye. Owing to an increased contrast new details could be seen, especially of the fovea and macula. We could measure with it by comparison the yellow discoloration of the lens in old age. The increased visibility of the retinal fibers with the red-free light was of great importance.

With its pathologic changes in the retina could be studied and localized. In the various types of atrophy of the nerve there was a general or localized zone where the normal retinal striation was found to be absent. In its place was found a white moth-like mottling of the surface. In retrobulbar neuritis this change was found in the maculo-papillary bundle. This disappearance of the retinal striations must be added to the symptomatology of optic atrophy and was the only known visible sign of retinal atrophy.

The macular zone was practically absent in Albinos. Vogt and Affolter failed to find the yellow coloration at the macula in living Albinos. Its absence was in direct or indirect relation to the lack of pigment in general.

In normal eyes this yellow coloration of the macula was very beautiful in appearance; also the foveal reflex of Dimmer, which showed as a very luminous, glistening spot.

Vogt described certain honeycomb-like changes of the macula in the red-free light. This vacuoli formation was found in retinitis pigmentosa, embolism, as well as in bulbar trauma, and was presumed to produce in time the condition called "hole in the macula." In one case hyphema were found in these systic spaces, which shifted on change of position of the patient.

Many new reflexes of the retinal surface were found with the red-free light; opacities of the media were increased in visibility.

It was not expected that this method would supersede the ordinary light for ophthalmoscopy. Certain conditions were seen in better contrast with the old light. There was no doubt, however, that with the red-free light there was added a most valuable and helpful method of diagnosis.

DISCUSSION

Dr. Michael Goldenburg said he became so interested in this lamp when Dr. Von der Heydt first called attention to it that he asked him to loan it to him and spent an entire afternoon looking at cases of various kinds. The lamp at present was not perfect, but he felt that Dr. Von der

Heydt should be given a great deal of credit for his work so far. The light offered wonderful avenues of approach which had never been available before. He had examined a number of cases and in one that he thought was an embolism of the central retinal artery with hemorrhages, the free blood looked black. The vascularization upon the disc of very fine vessels, which was not seen with the ordinary illumination, was visible as little black lines running across a white field. We were not sure about the nerve fibers but thought we could see them in one case; it required a good deal of practice to judge these things, and the three who had seen the case did not think they had sufficient experience to decide. In one case with an apparently normal fundus he had never been able to see the so-called choroidal opacities before but saw numbers of them when using this light.

Probably the most fascinating part of the red-free light was the ability to see the macula, as bright canary yellow, just like a bright brilliant spot in the blue field. They examined one case that was going through a low-grade form of neuro-retinitis. The patient had had several attacks. He did not feel that he could see the yellow in the macula in that case and neither did Dr. Crossley, but they could see it in the others, of what significance, this he did not know.

In the patient he had presented to the Society, where there were little fine fibers out to the nasal side, one could see the white lines very thin but visible, and the hemorrhages were apparent, standing out as black spots. He could trace the fibers from the disc out for a way, but not to the macula, but this was probably because he was not familiar with the use of the instrument.

Unquestionably the red-free light would be of unlimited value in the early diagnosis of retinal and optic nerve conditions.

In the case of a colored woman examined, he thought his glass had black spots, for in looking at the fundus the ordinary tessellated picture appeared, as definite black and white strips—a very marked contrast. He had never seen a similar picture.

Dr. E. R. Crossley stated that he had had the pleasure of examining the cases with Dr. Goldenburg and the macula stood out very well. In one comparatively normal case one could see the nerve fibers coming out but could not trace them around the macula as was described. On more experience with the light one might be able to do so. The blood vessels stood out plain and black and it gave a very good view of the macula.

Dr. Von der Heydt, in closing, said that Vogt and Affolter had been using the light since 1913 and had a vast amount of literature on the subject. Last fall he had the filters made and showed them to the Society.

With ordinary light it was comparatively simple to use the ophthalmoscope. One could pick up the light anywhere. With the red-free light, however, one had to seek the center of the cone of light. If one got into the periphery one ran into chromatic aberration.

His instrument was so tilted that it threw the cone of light in an upward incline. This enabled him to seat the patient at varying distances, according to his height. He guided himself by the bluish disc, thrown on the window shade, watched the image of the patient's head in it and led his ophthalmoscopic mirror into the center of the cone of light.

The colored person, rich in pigment, was comparatively a poor subject for the red-free light.

In the embolism case, seen with Dr. Goldenburg, he could not expect to see much more with the red-free light than with ordinary light, because the case was a very recent one.

There was still present an edema of the retina and it was too early to expect to see the atrophic zones which would later be visible in the fiber layer of the retina.

ORBITAL ABSCESES

Dr. Robert H. Good read a paper on this subject in which he considered orbital abscesses caused by

infections of the adjacent anatomical structures to the orbit, with special reference to the early manifestations of intracranial complications, so that by early operative procedure many cases might be arrested from meningitis and brain abscess.

These abscesses were found either subperiosteal, between periosteum and orbital bony wall, or between the extrinsic muscles with their membranous connections, and the periosteum; or between the extrinsic muscles and the optic nerve in the orbital fat.

Etiology.—1. Subperiosteal abscesses in the orbit were by far the most frequent and were caused by acute and chronic inflammations of the ethmoids, frontal sinus, maxillary sinus and sphenoid sinus. A good stereo x-ray would show whether the orbital wall was necrosed or not. Fractures of the orbit might cause a subperiosteal hemorrhage, which, if it became infected, formed an abscess. Extradural abscesses might find their way from the anterior fossa of the skull through the optic foramen external to the orbital periosteum. However, it was more frequent to have the pus go in the other direction, causing an extradural abscess from the orbital abscess. Tumors in the nose, such as polypi, fibroma and sarcoma, were often the cause of this form of orbital abscess. Tuberculosis and syphilis of the orbital bony wall were common.

2. Abscess between the periosteum and the extrinsic muscles of the eye, with their membranous connective sheath, were caused by an extraperiosteal abscess breaking through the periosteum into this space. Trauma, such as blows, causing hemorrhages in the subcutaneous areolar tissue, would form an abscess in this space if the blood clot became infected. Penetrating wounds and foreign bodies along the margin of the orbit, external to the extrinsic muscles of the eye and internal to the periosteum, would cause the abscess to form in this space. In dacryocystitis the sac might rupture into this region. Infection from subconjunctival injections of the eye would form an abscess in this space. Abscess of the lachrymal might rupture into this space.

3. Abscess internal to the extrinsic muscles were in the orbital fat around the optic nerve. As the membranous connective tissue sheath between the extrinsic muscles was very thin, it did not form a great barrier to the abscess external to the extrinsic muscles from breaking into this region. Ulcers of the cornea, panophthalmitis and penetrating wounds of the sclera had caused abscesses in this area of orbital fat. Penetrating wounds and foreign bodies posterior to the bulb and through the extrinsic muscles, or surgical procedures which entered this space, followed by infection, were sometimes etiological factors. The sphenoidal sinus was more frequently responsible for an abscess in the orbital fat than of the other sinuses. The serious complications were extradural abscess, optic neuritis, optic atrophy, meningitis, brain abscess and thrombosis of the cavernous sinus.

The extradural space was continuous with the sub-

periosteal space of the orbit and communicated with each other through the optic foramen, so that a subperiosteal orbital abscess might drain into the extradural space and form an extradural abscess. The optic nerve had the same coverings as the brain, namely, from without in, the inner layer of the dura, arachnoid and the pia. The subdural lymph space in the skull extended all along the optic nerve to the eyeball and the subarachnoid space, which contained the cerebrospinal fluid, and communicated with the subarachnoid space of the optic nerve.

The dura of the optic nerve was only the inner layer of the dura, and was thin compared with the dura of the skull, and it was very vascular with many blood vessels entering it, so that toxins would penetrate it much more readily than the dura of the skull. The dura of the optic nerve differed from the skull dura in that it did not have the properties of forming bone, and, therefore, was much less dense in structure.

When toxins entered the subdural space of the nerve, they might cause cerebral symptoms, and if they entered the subarachnoid space of the nerve they resulted in cerebrospinal meningitis because this space was in direct communication with the cerebrospinal fluid. An abscess pressing on the nerve with accompanying edema, as well as absorption of toxins, resulted in optic neuritis and atrophy. An abscess around the optic nerve in the orbital fat pushed the eye straight forward and generally ended in blindness or in meningitis. Involvement of the central vein of the retina or the ophthalmic vein resulted in thrombosis which might extend to the cavernous sinus and produce the same symptoms as lateral sinus thrombosis.

The most frequent location of the abscess was at the inner anterior aspect of the orbit in the region of the lamina papyracea of the ethmoid cells which cause the eye to be pushed outward and somewhat downward.

The next frequent location was in the upper and inner angle of the orbit where the frontal sinus wall was the thinnest and pushed the eye downward and outward. Either of these, if untreated, might break and leave a fistula above the inner canthus of the eye. When due to maxillary sinus infection, the abscess was in the floor of the orbit and pushed the eye up and outward. Orbital abscess from posterior ethmoids and sphenoidal sinus were rare, but when they did occur the eye was pushed forward and the pain was severe even in chronic cases.

The symptoms varied greatly, depending upon whether it was acute or chronic, the part and extent of the orbit involved, as well as the nature of the infection. In chronic cases the symptoms were usually mild, a slight pain with tenderness on pressure. There was slight swelling of the lids and conjunctiva. On palpation a firm mass could be felt. The febrile symptoms were usually negative. In acute cases we had a different picture, especially if the abscess were between the periosteum and the extrinsic muscles or in the adipose tissue. There was marked exophthalmos

and great swelling of the lids and conjunctivae with inability to close the eye. The pain was severe in the orbit, radiating to the temple. The temperature was usually high, from 100 to 103 with a corresponding rapid pulse. The eye ball was almost immovable and the power of accommodation was lost.*

When the abscess burrowed along the periosteum or along the dura of the optic nerve, it entered the extradural space of the skull by way of the optic foramen and produced an extra dural abscess which cause an absolute change in symptoms and could easily be diagnosed. The tenderness in the eye might be the same or lessened, but when the skull was firmly compressed over the painful areas, the pain was much more marked. The temperature dropped to 96 or 97, no matter if the temperature had been 104. The temperature lingered around subnormal to 99. The pulse dropped at times as low as 50. In addition, the patient complained of dizziness, especially on stooping. The projectile or cerebral vomiting was always present and the mental symptoms varied from indifference and slow cerebration to coma. The blood pressure was increased.

In these cases, in addition to opening the abscess one must expose the dura by removing the posterior wall of the frontal sinus and the patient would make an uneventful rapid recovery.

When the toxins entered into the subdural space, the symptoms were those of mild cerebral irritation, whereas, if they entered into the subarachnoid space of the optic nerve, it caused a cerebro spinal meningitis; both of which should be treated with Flexners or Lederly's anti-meningitis serum intra spinally.

As to treatment, an incision was made through the skin over the most prominent portion of the abscess, not necessarily into the abscess, then a small curved blunt artery forceps was inserted into the abscess and withdrawn by opening the forceps. Care should be taken to direct the forceps towards the orbital wall, instead of the optic nerve region, so as not to penetrate the extrinsic muscles or their membranous sheath, as most abscesses were external to these. When the abscess was very large and surrounded the bulb, it was wise to drain it in more than one place.

The great majority of orbital abscesses were due to sinus infections, and in these cases the sinuses should be thoroughly drained in addition to the above. Where the abscess was outside of the orbital periosteum and the sinus wall was broken down, an intranasal operation on any of the sinuses was sufficient to relieve the orbital abscess. Ten years ago the speaker was of the opinion that the frontal sinus or ethmoids had to be opened from the outside, but his rather extensive experience in intranasal sinus surgery had proved to him that these cases recovered faster with less tendency to recurrence with the intranasal than with the external operations.

DISCUSSION

Dr. Oliver Tydings complimented Dr. Good on the work and illustrations he had presented. He said he had a case under his care at present who was operated upon by a

man who was an expert, but the patient was blind in one eye. The history was unique. The patient had some intense pain which the speaker attributed to an eye trouble, an infective condition. She never had any pus but had sinus pain and the sinus was opened on the left side and following that was a mastoiditis, blindness due to orbital pressure. That was operated upon and from what the patient said there must have been a meningitis which lasted for some days, during which time she claimed to have been unconscious. The patient finally recovered from that but still had a suppurating condition. He did a radical mastoid but had not yet finished the nasal work. The operations described by Dr. Good were apparently safe in his hands but, unfortunately, were not always safe in the hands of some others.

In the treatment of these cases he had followed practically the line laid down by Dr. Good, except in infants. An orbital abscess due to a sinus condition he thought would not be very safe. He had treated most of these cases and he felt that the fact that he knew so much about nose work might account somewhat for the success he had in treating them. He would make both an external and internal incision, starting down through the projecting portion and making an incision through the orbital plate of the ethmoid and down through the nose, a single incision, usually breaking the abscess down with the knife, being careful not to cut any muscular tissues. He had operated quite a large number of cases in that way in children perhaps less than two years old, with very good results. He felt that free drainage was worth a great deal in these cases.

Dr. M. H. Lebensohn thought that an orbital abscess was just like one any place else. It made no difference originally where the infection came from as to what sort of an infection it was. About four years ago a man of seventy developed a large orbital abscess following probing of a stenosis of the lachrymal duct. Within twenty-four hours after the probing he developed an orbital abscess and they found a pure streptococcus culture. It was opened several times, no pus was found, but it finally got to the eye. The same night he had another case and that was a staphylococcus infection. It was opened and drained and within a week or ten days the patient got well. In a patient who had recently been discharged, a boy of eighteen, he could not make a diagnosis as to the etiology. It looked like an ethmoid infection with an almost pure pneumococci culture. He drained the abscess and when it was opened he got between three and four drams of pus. He kept on ethyl hydrochlorate with little strips of gauze and it cleared up remarkably well. He thought it was not so much the opening, but advised opening them as soon as possible. He thought the prognosis would depend upon what the infection was. The staphylococci infections have a good prognosis, the pneumococci and streptococci bad.

Dr. R. H. Good, in closing, agreed with Dr. Tydings that establishing a perfect drainage was the best treatment.

In cases of suspected ethmoid infection, instead of spending so much time in finding out the nature of the infection bacteriologically, it was a better plan to take a stereo-roentgenogram and find out the nature of the condition at once.

Dr. Michael Goldenburg exhibited a case of embolism of the central retinal artery as a complication of influenza during the fall epidemic of 1918.

Mrs. E., age 22, married, one child. Had always been in good health.

On November 20th, 1918, during the virulent epidemic of influenza, she developed this disease, passing through the usual stages, a very sick individual. On about the eighth day, when her temperature was at its highest point, she suddenly felt something had happened to her right eye; then noted that she was blind in that eye; further states that the eye felt stiff and

was wild looking and later eye deviated outward. I should judge from her description that the pupil was widely dilated.

On February 12, 1919, she presented herself to our clinic at "The Illinois Charitable Eye and Ear Infirmary."

Examination: Lids, conjunctiva, cornea and anterior chamber negative.

Pupils equal and react to light.

Vision, Right: Fingers at two feet and then only in the upper temporal field.

Left: 20/20-3.

Fundus, Right: Disc-primary optic atrophy, cloudy grayish pink area about two disc diameters noted from disc temporalward beyond macular region. All arteries markedly diminished in caliber, except upper temporal branch which is about half normal in diameter. Branches running nasalward very thin and end in white lines. Many small hemorrhages in region of macula and on nasal side, both superficial and deep. Directly over bifurcation of artery a small grayish dot is noted that I was inclined to think was in the vessel, but could not be positive, other observers would make no definite statement upon that fact.

Left: Fundus and media negative.

General physical examination, made by a competent internist disclosed the following: Heart negative. Aortic second sound slightly accentuated, which speaks against a valvular lesion.

Lungs not quite healed. In right upper part of lung still some consolidation that could be tubercular, but most likely unresolved area.

Blood pressure—120.

Urine—Negative.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otolological Society was held in the room of the Chicago Political Equality League, Tuesday evening, February 18, 1919.

The president, Dr. Elmer L. Kenyon, in the chair.

Dr. Walter B. Swift, of Boston, addressed the Society on "Problems Involving the Nasality of the Human Voice."

Dr. Swift appreciated the fact that he had been requested to address the Society and thought this pointed to the fact that men were becoming interested in some of the more complex things that were inside the specialty. Speech defects had been left to the end of our study because the subject was considered absolutely too complex and hard to analyze, but in the last few years that attitude had largely changed and medical men were having their eyes opened to the simplicity of the things that looked so complex before. He considered speech a function of this specialty and thought that by understanding and trying to build up the capacities of the function they would not only become finer and more thorough throat and ear men, but that it would be of value financially and in research. The subject of speech de-

fects was much like the nervous system in medicine. The nervous system was left unstudied and unknown for many years, but twenty or twenty-five years ago people went into it, and things that formerly could not be recognized were now easy to understand, so much so that there was now a recognized system of diagnosis of nervous disorders. This complex field was opened out, and its parts separated and divided so that the parts could be seen and analyzed and one could make scientific judgment upon it.

The same thing had occurred in speech until now it was fairly easy to diagnose defects and build up functions. He hoped that the members of the Society would become interested in the relationship of this work to public school work. He was devoting his entire time to speech disorders, for it seemed to him he saw a large field unplowed. There was no field in medicine that was so interesting as this field of speech. There was a National Organization composed of about two hundred and fifty members that had been in existence for about four years and up to date four hundred and thirty papers had been read in that organization.

In Chicago public schools, they are endeavoring to build up a plan similar to the one in operation in Cleveland, where they had a large and successful speech department in the public schools. There they had three thousand cases with fifteen teachers who were trained to do the work. Here in Chicago the cases were not taken care of until they were in the higher grades, and that was largely without diagnosis. In Cleveland they had diagnosis and also a movement for prevention, which was a new idea in speech correction. They began by training speech cases in the kindergarten and expect in that way to prevent from one-third to three-fourths of the cases of speech disorder higher up. This was very interesting and valuable and they hoped to be able to amplify and perhaps improve on it in Chicago. There ought to be a good deal of expert diagnosis in these cases because speech correction could not be established without portraying the causes behind it. The diagnosis of paralysis, of Mongolian idiocy and all other diseases was of great value and no program of speech correction in the public school was reliable or what it should be without the diagnosis in the background. They wanted to have Chicago an example to the world and with such an able representative as Doctor Kenyon in the field this could be accomplished here. There were enough men interested to accomplish these things if they worked in collaboration.

Dr. Swift described in some detail the various different forms of speech defects. He believed that speech correction was now being taken up in a more scientific way than ever before. At the present time Cleveland stood as a model for speech correction for America, but they hoped to have even a better department in Chicago. At present no city had the movement for speech defect prevention that they had in Cleveland, no other city had speech correction taught in two normal schools as they had there, and no other city had speech correction inserted into the regular

school grades as there. It was not merely a mouth treatment; but when done in the modern way was largely mental up-building. It built up the visual perceptions and a more acute ear than was ever the case before, especially in the teachers who studied the subject. In the Cleveland schools they had "part time" teachers who did this work part of the time in the afternoons, but he considered this better than having special teachers for speech correction. After careful analysis they had come to the conclusion that this was the most efficient way to attack this problem.

There were four fields or faults to be dealt with in the nasality of the human voice—"Obstruction Nasality," "Destruction Nasality," "Misdirection Nasality," and "Misplacement Nasality," and all must be treated in different ways.

Dr. Calvin S. Case presented a paper entitled "The Efficiency of the Modern Velum Obturator."

The essayist stated that anything which was capable of restoring the possibilities of perfect speech to cleft palate patients must be capable of imitating the action and function of the normal voice.

The first and most indispensable part of the involuntary function of the normal velum was the act of completely closing the oro-nasal passage in order that the air blasts of speech might be wholly directed and forcibly thrown into and through the oral cavity to be formed into the articulate sounds of speech.

The second important part of its function was its light, sensitive rapidity of movement.

The third important part of its function pertained to normal voice tone quality and resonance.

In the complete closure of the oro-nasal passage, the natural velum performed two important functions: First, it enabled forcibly pressing the air which was the medium of speech, into and through the oral cavity for the distinct articulation of all the breath sounds of the consonant oral elements, which would not be possible to that perfect extent if any portion of the air were allowed to escape into the nose. Second, this closure was quite as necessary for the requisite *resonating* quality of the vowel elements as it is in the performance of its office for the consonants, but for the distinct *articulation* of the vowels it was not so necessary that it be completely closed. For this reason nearly all patients with open clefts would quite distinctly articulate all the oral elements of the vowels, *but always with a decided nasal tone and with no true resonating quality*. The only times when it was admissible in perfect speech for the oro-nasal passage to be open was in the utterance of the nasal oral elements, m, n. and ng, which were similar to vocalized humming tones that were sounded before, after and between the true vowel and consonant oral elements which demand a complete closure of the oro-nasal passage.

Relative to treatment—if a surgical operation could be performed that would restore the requisite normal mobility of velum with its full functioning power to completely close the oro-nasal passage, perfect acquirement of speech was then possible. If a complete

surgical closure of the cleft was accomplished during infancy in such a manner as to leave a minimum amount of cicatricial tissue in the velum, there was a chance that the soft palatal tissues would grow and develop in proportion to the normal development of the maxilla and adjoining bones, at least up to the time of beginning its speaking function. With patients who have had no operation the bifurcated palatal tissues were usually found quite lacking in normal growth development, somewhat in proportion to age. Operations at any time after five years of age were not very successful and while the skillful surgical method would often be found to greatly improve or fully correct the articulation, rendering the patient's speech readily understood even by strangers, the predominating character of his speech would always be of a nasal cleft palate quality.

These same imperfect results must also obtain with all artificial palates and obturators which were incapable of imitating the functions of the velum palati. The modern velum obturator which had developed within the past fifteen years was instrument which came very close to all the scientific requirements of perfect speech, and one which could be depended upon to enable all patients under twenty-five years of age, with typical clefts to speak with not only perfect articulation, but with normal voice tone quality and resonance, providing the operation was followed by the proper kind of training in phonology and orthoepy.

The principal reason for its successful activity in the requirements of speech was the fact that it was almost as light as a feather, and that it was not attached to any dial or dental fixture, and therefore was able to freely and quickly respond to the slightest movement of the palatal muscles. It rests evenly and freely upon the floor of the nares and along the upper surface of the palatal tissues, completely closing the cleft. Its velum-like pharyngeal portion was as thin as a wafer, except at the borders which receive the firm pressure of the pharyngeal muscles in the active state, in completely closing the passage to the nose; while in the relaxed state of the muscles there was sufficient space for healthy nasal breathing, etc.

While it necessarily extends far back in the throat, being unattached it moves freely with the muscles, is worn with perfect unconsciousness of its presence during all waking and sleeping hours and there is no possibility of its falling into the throat, although it is easily removed for cleansing purposes. The obturator must be seen in action to be fully appreciated.

DISCUSSION

Dr. Elmer L. Kenyon vouched for the remarkable efficiency from a voice standpoint of Dr. Case's obturator. It not only effectively fills in the cleft, but it in no way interferes with the movements of the palate. Nearly all patients operated for cleft palate after the development of speech had begun require speech training. This is because of the wrongness of education under the impaired physiologic conditions of the voice apparatus of the sensory and motor word centers. He reported a case in illustration of the importance of discrimination in operating for adenoids and tonsils on a person having an open nasal voice. Such a patient is apt to have a short palate and this operation is

capable under such conditions of doing much harm. Whenever a permanent opening is present in the soft palate, thus producing a nasal voice, operative work on the nose or naso-pharynx for the purpose of enlarging the breathing space should be undertaken with marked conservatism; otherwise, the nasality of the voice is likely to be increased.

Dr. Robert Sonnenschein said the fact that the study and appreciation of voice defects required a highly trained man in every sense was demonstrated to him during the course he had the privilege of taking in Berlin, in 1910, under Professor Gutzmann. In this field were combined the qualities of the neurologist, the physiologist and the laryngologist. He wanted to learn in a general way what he could in order to appreciate the difficulties they have to contend with. He thought we were fortunate in having in this city a man like Dr. Kenyon and in the east a man like Dr. Swift who had undertaken the treatment of these diseases. It had seemed a pity to him that so many of his colleagues had neglected the study of these cases, and the reference of them to men who could treat them properly, but had left them to the mercy of the advertising charlatans who could not get proper results as they did not treat the patients scientifically.

With reference to the cases Dr. Kenyon mentioned, he wondered if Eckstein of Berlin, with whom he had a little paraffin work, would not advise that method. He had had good results with paraffin—the hard paraffin which melts at or above 52° C. The great objection to those operations had been the embolism which had occurred, oftentimes with complete blindness of the retina, but this had occurred with the soft paraffin. The hard paraffin had practically never caused amaurosis. He had seen Eckstein inject in these cases where there was lack of proper functioning of the palate, a mass of paraffin. The hard paraffin had practically never caused amaurosis. He had seen Eckstein inject in these cases where there was lack of proper functioning of the palate, a mass of paraffin. This permitted a contact of the soft palate and greatly improved the voice. This was a simple procedure with the paraffin melted and injected. The paraffin hardened almost immediately and the cases he saw in the clinic seemed to functionate very well.

Dr. H. L. Pollock said in reference to what Dr. Sonnenschein had stated that they had seen many of those palates. One case was that of a woman who had been operated and wanted to have her voice corrected. They followed the procedure of injecting paraffin and obtained an almost perfect voice. The palate was short and stiff, as was often the case, and the principal difficulty was in getting the proper amount of paraffin. It was almost like injecting it into the septum. They injected a little and in a few days a little more; there was less and less reaction with each injection and finally the voice became almost perfect. In subsequent operations they had not obtained as good results, but in the case of short palates it did improve the voice materially. If the palate would not move toward the pharyngeal wall this procedure would bring the wall toward the palate and he thought it was the only thing that could be done after the cases had been operated.

Another thing was the matter of training these individual's voices properly. In nearly all cleft palate cases where there was a nasal twang the patient seemed to be unconscious of this. The patient would repeat what was told him and repeat it with a nasal twang, and think he was saying it properly. In one case, a young man of twenty-one, who had had several operations and all but a very small opening was closed, there was a distinct nasal twang of which the patient seemed to be entirely unaware. They procured a phonograph record and had him read a poem into it and then had him listen to the record and he could not recognize his voice. These patients were under the impression that they were speaking as distinctly as anyone, and this young man thought he was speaking correctly until he heard the reproduction of his voice in the phonograph.

Dr. Arthur M. Corwin thought that with the exception of Dr. Kenyon, the members in general knew very little

about the subject of these excellent papers. Dr. Kenyon had given it careful, intensive study and this was bearing fruit out of the years. One peculiar thing was that he trained a great many of the little defectives, who were not necessarily anatomically defectives but "habit defectives," and in order to train them he had to bring into play in an intensive way his own articulation and in the course of a few years he (Dr. Corwin) had noticed an immense progress in his (Dr. Kenyon's) use of his lips and palate and tongue, in the clearness of his enunciation, and that was one of the reactions that a teacher-student would always get.

Since the first of January, Dr. Corwin had been giving his services once a week for twenty-five weeks to the Y. M. C. A. in Oak Park as a director of public speaking (although he had never done anything like this before in his life). There were thirty-five men in the class, ranging from fifty-five to eighteen, business men, salesmen of insurance and real estate, physicians, lawyers, etc. Several of them had speech defects, some had a nasal twang. These men got up and made their two-minute speeches and then Dr. Corwin criticized them, and it was astonishing to see the progress those men had made in six or seven sessions, not only in handling themselves, but in the art of expression. Sometimes he took certain men aside and gave them special suggestions and criticisms.

He believed people with speech defects should be watched for and referred to the men who could give them the necessary training in the most scientific way.

Dr. D. P. MacMillan, Director of Child Study, Chicago Public Schools, said that in line with the plea outlined in the remarks of Dr. Swift, they had been endeavoring for years to get for Chicago some adequate scheme for the correction of speech defects of all sorts. He had been watching with particular attention Dr. Swift's writings and was much interested in the scheme of organization inaugurated at Cleveland with which he is connected. At present the work in Chicago on the correction of speech defects was not linked up with any effort to attack the supply at its source nor to broaden its scope to correlate it with the standardization of minor speech defects and general incorrect use of the voice. The work was largely concerned with attempts to retach pronounced defects of speech disorder among children. At present there are only eleven teachers who devote their time to this correctional speech work. The problem cases are referred to him for advice and then they are parceled out to the teachers in charge. Moreover they are brought back from time to time to check up on the hygienic program which was previously outlined for each individual. Necessarily it is impossible to give much individual attention to some two hundred and fifty per year because of the demands of the four thousand four hundred other kinds of defects that pass through their hands. It was apparent that those who need much intensive work do not all receive the needed care. He would like to have an organization specially correlated with their work for other kinds of defects found among children. In principle they believe in remedy, relief and correction, but they are wedded to the idea of prevention, which is, after all, the right arm of education. Speech defects, minor or grave, must be corrected at their source and indeed must be prevented from arising. It was because of this feature that the work of Dr. Swift attracted him.

Dr. Swift (closing) expressed his admiration for the splendid paper of Dr. Case. He had noticed one constant and peculiar thing about the cleft palate cases and that was that a great many of the speech defects occurring in these cases had nothing to do with the cleft palate. He believed that one-half to two-thirds of the faulty speech was entirely outside of the cleft palate etiologically.

He was interested in Dr. Corwin's remarks concerning the improvement in those who trained other voices. When a teacher took a class and trained it her speech and enunciation became much clearer and more distinct and easy than it ever was before, and this also had a direct influence on the members of the class. One of Dr. Swift's teachers

who was an assistant in a kindergarten class, where there was no speech correction, said that the supervisor of music found that this class was the only one where she could understand the words the children sang. The Y. M. C. A. was prone to have classes in speech correction and he considered that a very unfavorable criticism on the academic method of the past and present. Men should not have to be taught how to talk after finishing their school. Speech and its functions was one of the most important things for grown-up individuals to have a mastery of. Many men had plans and thoughts that they would like to get up and talk about in meetings, but they lacked the ability to do it. He thought suggestion was largely to blame for this. When in Harvard, his functions had been largely hearing and writing functions; for four years he was trained to listen and write the thing down quickly and think very little about it. The brain areas used in making that type of individual forced a tremendous development of those areas but now he did not use them, and he believed he should have been developed into a listening, thinking and talking type of individual.

He was glad that Dr. MacMillan appreciated the need for those things; the feeling of the need for prevention was the most important thing in speech correction. No medical efforts were right unless there was some work instituted along the line of prevention. He had a great fight to put prevention into the Cleveland schools, but finally succeeded.

As to referring cases to a pathologist, he understood this to mean that all cases should first be diagnosed by a medical individual and then handed over to the proper teacher. The Cleveland teachers were sufficiently trained to make some of the diagnoses themselves so they preferred to have the cases go first to the teacher and then to the pathologist if necessary. They had not done anything with the deaf in the public school. The "part time" teacher was a grade teacher who could keep on with her usual work and devote part of her time to speech correction.

They considered that the kinesthetic approach should come first and this followed up by the development of the acoustic element. Then the visual areas should be brought in and educated to control the speech output, so that when the visual processes were fully developed both of the others were relegated to the unconscious, so that most of the things in the mind of the person when he was talking was the visual element. Some made merely the kinesthetic approach, and some merely the acoustic, and very few the visual.

He agreed that speech correction was very hard to get into the public schools, but thought the wave of Americanism that was sweeping the country might bring it.

THE CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held on Monday evening, March 3, 1919, at eight o'clock in the rooms of the Chicago Political Equality League, 1102 Stevens Building.

The President, Elmer L. Kenyon, presided.

PRESENTATION OF CASES

Dr. N. Schoolman presented a lady, twenty-four years of age who had been married for nine years. She had one child who died at the age of three months of convulsions. Subsequently she had a miscarriage at four months. She stated that she was well until about six months ago, except for an injury to her leg, which occurred in childhood. At the time of presentation, there was quite a good deal of pathology in her throat. The soft palate was almost adherent to the

posterior wall of the pharynx and she was entirely unable to breathe through her nose. The Wassermann reaction was positive.

DISCUSSION.

Dr. L. W. Dean asked if any one had ever had even fairly satisfactory results in operating on these cases after the stage of cicatrization had been reached.

Dr. H. Pollock said they had had three or four similar cases in the last few years. After securing a negative Wassermann test on the blood and spinal fluid they operated on them in different ways; turning a flap backwards into the nose and trying to make an adhesion with the flap they separated from the posterior pharyngeal wall and suturing it through. In the first two cases catheters were used for several weeks, and they gradually grew together. In the other two they used an obturator. Every one of the cases returned to the same condition they were in before operation. He had never seen anything but a nil result in any of these cases.

Dr. A. M. Corwin cited a case which he had tried to remedy with the co-operation of the late Dr. Hugh Ferguson. They turned one of the tonsils partly out and attempted to sew it in place posteriorly in the wound, hoping that it would become adherent in the palato-pharyngeal angle, to block the scar retraction as an island of new epithelialization. They thought for a time this was going to be successful, but it sloughed out and the condition was as bad as before.

Lt. Col. Wishart (Toronto) had not had any better luck with his cases. He wondered whether some such method as was being used in the facial work in London could not be used to good advantage in these cases.

SARCOMA OF THE TONSILS

Dr. L. W. Dean reported a case of sarcoma of the tonsil, the only one which he had had. This was an extremely rare condition, only about eighty cases of sarcoma of the tonsil having been reported. His case was particularly interesting because the patient was under observation for three years without apparent metastases, dying at the end of that time from a pneumonia following influenza. The patient was a well-nourished man, seventy years of age, who came in complaining of a mass in his throat. Examination revealed several egg-shaped, perfectly smooth, light colored masses about an inch in length growing from the right tonsil. He refused hospital treatment and all that could be done was to remove the masses as they appeared. Microscopic examination by several different pathologists confirmed the diagnosis. In the course of six months the patient developed the same type of growth on the left side. They enucleated his tonsils, using the ordinary procedure. After the removal of the faucial tonsils there was no recurrence in the fossae of the tonsils, but it began on each side of the lingual tonsil adjacent to the faucial tonsil and extended to the midline. Dr. Dean exhibited a specimen consisting of about one-third of the tumors which had been removed during the three years. No post mortem examination was secured. Dr. Dean felt that if the man could have been induced to come into the hospital for proper dissection of the tonsils early in the course of his disease the whole condition might have been obliterated.

DISCUSSION.

Dr. A. M. Corwin recalled a remarkable case seen a number of years ago. The patient was a large man who complained of severe griping colic in the pit of his stomach. When Dr. Corwin saw him he was anasarcaous. He had

definite kidney findings, indicating active destructive processes. There was no history of syphilis. There was a melanotic growth in his left tonsil, extending down the side of his tongue and onto the base involving the lingual tonsil, where a round tumor interfered considerably with his swallowing. The growth was firm and as big as a small hen's egg; it bled freely. The man had difficulty in eating and swallowing; his heart was dilated and revealed a valvular leak. By injecting with adrenalin and cocain and following that with alcohol they were able to remove the growth without hemorrhage. The whole lingual tonsil was affected with these growths, which proved to be round-cell sarcoma. They painted the area with strong silver nitrate every day in the hope of keeping down secondary infection. There was a large glandular involvement at the angle of the jaw, evidently an acute infection. The patient was given hypodermics of amylopsins and trypsin and they were also given internally. An unfavorable prognosis was made and the patient went home. Dr. Corwin afterward corresponded with his home physician and sometime later received a letter saying that the patient had passed a large mass per rectum, following which the urine cleared up, as did the tongue and tonsil condition, and there was not a remnant left. He had gained in weight and was back at work, apparently as well as he had ever been.

Dr. Charles H Long related the case of an eleven year old boy whom he had seen some years ago. He was brought to the hospital for removal of tonsils and adenoids and on account of post-operative hemorrhage was in the hospital for six weeks. Examination of the tissues removed was reported to show sarcoma. Because of the unfavorable prognosis, Dr. Long advised roentgenotherapy. Several exposures were given with a small tube especially designed for throwing the rays into the throat but every treatment seemed to increase the hemorrhage and cause headaches and they were discontinued. The growth increased in size, commencing in the adenoid region and continuing forward, pressing the contents of the orbit and the antral wall before it, so that the left eye was very much projected and the nasal septum was forced to the opposite side. One morning the boy had a severe attack of coughing and choking and examination disclosed a long dark colored piece of flesh about the size of the little finger lying to the outer side of the tongue. A portion was removed and pathological examination proved it to be a fibroma. It was then decided to remove the growth. A preliminary tracheotomy was performed and a tumor the size of a man's fist was removed through the mouth. A very successful result was obtained, and the boy was going along nicely. Dr. Zeit, who examined both specimens stated that in the early stage of these growths it was impossible to differentiate round-celled sarcoma from round-celled fibroma.

Dr. N. Schoolman mentioned the case of a man who had recently come to the infirmary complaining of severe headaches and presenting a paralysis of the muscles of the right eye. While under observation he developed a large painful, fluctuating swelling, with extensive edema of the right eyelid which entirely closed the eye. There was tenderness over the left frontal sinus and slight edema of the left eyelid. His nose on the right side was fairly free; the left side was occluded by a mass which bled freely on the slightest examination. The right frontal sinus was opened by a Killian incision and it was found that the anterior wall of the sinus was necrotic and discharging considerable pus; the intersinus septum was necrotic, with pus flowing from the left to the right sinus, so the septum was removed and both sinuses converted into one large one. A remarkable feature was that the sinus would almost fill up over night with soft bleeding granulations, and the catheter which was placed in the nose would become anchored. The pathologist reported a rapidly growing carcinoma.

Dr. H. W. Loeb (St. Louis) said he had seen two cases of sarcoma of the tonsil. In one the diagnosis was not confirmed, because the patient refused any sort of operation. The second case was a woman about sixty years of age who told them that the mass had been growing for three or four years, and within the previous two months there had been considerable swelling in the anterior cervical glands. A small

portion was removed and the pathologist reported a fibrosarcoma. The growth was removed through an incision across the cheek from the upper angle of the mouth, and following this the cervical glands were removed. The case remained under observation for three years without recurrence, in spite of the glandular involvement.

Dr. Otto Stein reported the case of a boy of ten who was under his observation twelve or fourteen years ago. There was apparently a sarcoma in both tonsils. A mass the size of a walnut was dissected from the left tonsil under local anesthesia, with a good deal of difficulty. The right one was not operated upon. There was no particular bleeding. Pathologic examination showed the growth to be a round-celled sarcoma. Dr. Stein kept in touch with the patient for several years and there was no recurrence on the operated side and the side not operated cleared up spontaneously.

Dr. Dean (closing) thought from the discussion one important factor could be deduced; namely, that in so-called sarcoma of the tonsil the prognosis was good, or at least fair if operated on early.

Dr. A. M. Corwin presented a paper entitled "A Case of Chronic Bilateral Abductor Paralysis of the Vocal Cords (Crico Arytenoideus Posticus); Result of Goiter Operation."

The patient was a boy aged nineteen, with negative family history. For six years he had had a fair-sized symmetrical enlargement of the thyroid region, which extended low in the neck. Difficulty in breathing was first noticed three-and-a-half years ago. In May, 1916, tonsillectomy was performed, with no improvement in the condition. In August, 1916, the goiter was operated on by a good surgeon, but three days after operation the stitches broke, the wound opened and became infected. Convalescence was slow. He had aphonia for thirty days immediately following the operation and the voice was hoarse for sixty days after operation but breathing was easy and noiseless. In the fall of 1916 he developed noisy, stertorous breathing when asleep; this stertor disappeared when he was awake. Any extraordinary effort brought on pronounced dyspnoea which was evidently laryngeal. He could engage in no self-supporting occupation of an active muscular kind, and was growing gradually worse.

His voice was strong, clear and of good quality. The heart and lungs were normal, as were the ears, nose, pharynx and oral cavity. The inspiratory sound over the whole chest was rough and sonorous upon deep, active breathing because of the wide transmission of the laryngeal rale present with forced respiration. The tonsils had been well excised. The base of the tongue, epiglottis, prima glottis and the arytenoids were normal. The arytenoid cornua formed by the cartilages Santorini located at the apices of the arytenoids were unusually prominent, though symmetrical and normal.

Upon expiration the vocal bands were fairly white and at first sight normal; upon inspiration a striking fault was at once apparent. The right cord, which seemed thicker than usual, was stationary in the median line both on inspiration and expiration. There was nothing to indicate possible ankylosis; there was no tenderness or other evidences of arthritis or inflammation in this region. The left vocal cord was in a similar median position, but showed very slight

movement in abduction during inspiration, especially in its posterior fourth. The recurrent laryngeal nerve supplying all the other muscles with motor impulse was evidently bilaterally at fault.

The history pointed to the recovery of the function of both recurrent laryngeal nerves after the thyroidectomy. The voice returned and there was dyspnoea or nocturnal stertor until some weeks later. The conclusion was, therefore, that the contraction of the extensive scar made destructive pressure upon both nerves, which had not been destroyed by direct operative interference. The patient had time during those weeks to accommodate himself to this slow on-coming paralysis, which often proves fatal when occurring suddenly.

The prognosis was bad as regarded usefulness, but the voice was very good. The question was whether one was justified in removing a part of one or both of the vocal cords, just destroying the voice but restoring physical efficiency. Dr. Corwin thought best to advise the punching out of a portion of one or both cords, after a preliminary tracheotomy and hoped to report good results.

DISCUSSION.

Dr. L. W. Dean stated that he had a case almost identical with this one. The patient was a school teacher, twenty-eight years of age, who was operated on for goiter. Immediately afterward a bilateral abductor paralysis occurred. He was consulted by her three months later because of dyspnea and examination of the larynx showed an absence of abduction on each side. During deep inspiration there was only the slightest change in the glottis. She had expiratory dyspnea and attacks of spasm of the adductor. Dr. Dean was inclined to consider the case as one of paralysis of the abductors in accordance with Seeman's law, and felt that because experimental stimulation of the central ends of the pneumogastric caused a spasm of the adductors on the opposite side, that possibly there was not only a paralysis of the recurrent laryngeal but also an irritation of the pneumogastric. After observing her for several weeks a punch operation on the cords was advised, but refused. He then advised that in case of the slightest dyspnea she should immediately go into a hospital. This she did, but the hospital was not prepared to do a rapid tracheotomy and she died from the dyspnea, the result of laryngeal obstruction. He felt that Dr. Corwin was justified in advising the destruction of one cord, even with the resulting loss of voice.

Lt. Col. Wishart was interested in Dr. Corwin's case because of one of similar nature in the military wards in Toronto. The patient was a boy of twenty-one, whose thyroid had been removed, followed by the loss of his voice. He had apparently had some pathology in the chest, presumably tuberculosis, and had been invalided back to Canada without treatment of his throat. The breathing grew rapidly worse and a hurried tracheotomy was required. Owing to the great amount of scar tissue no examination could be made of the vocal cords or larynx. After the patient wore the tracheotomy tube for some time, they removed it and tried intubation but had to do the tracheotomy again. They then split the larynx and dissected out one vocal cord. This brought relief for six weeks, when they had to put in a tracheotomy tube again. He hoped to hear how somebody could relieve this condition.

Dr. Robert Good thought that since the pathology in Dr. Wishart's case was scar tissue and contraction it might be possible by resecting the scar tissue on one side only, under local anesthesia, to relieve the pressure on the nerve.

Dr. Elmer L. Kenyon supported Dr. Good's suggestion. Since the interior of the larynx was anatomically unimpaired he thought it might be possible to produce a complete paraly-

sis of one cord by a re-operation on the neck. This would serve to throw one cord outward into the cadaveric position, thus supplying sufficient breathing space, providing the cord on the opposite side did not persistently over adduct beyond the median line. If the condition produced by completely paralyzing one cord persisted, the voice would eventually become normal and remain so. If, however, the over-adducting cord, by overlapping the median line, should still prevent free breathing, that cord could by operation on the neck be caused to become completely paralytic, and so take the cadaveric position also. Thus the breathing space would be rendered sufficient but the voice destroyed.

Dr. Wishart said that prior to resection of the cord they cut down through the scar tissue on the left side, but it was so dense they could not see where the nerve was. He thought the twisting of the larynx had a great deal to do with the condition.

Dr. Robert Sonnenschein said that for relief of bilateral abduction paralysis of the vocal cords following a thyroidectomy, Dr. Boot had cauterized, with the result that contraction of the scar tissue produced a small passage-way for inspiration.

Dr. Corwin (closing) saw no reason why cutting the cord in two in the middle and allowing the ends to retract would be objectionable as far as future scarring was concerned. As the dissection of the cord was submucous there ought to be a minimum of scar tissue. He did not know whether dissection of the recurrent nerve and anastomosis with the superior laryngeal had ever been attempted, but from the small size he would consider such a procedure impracticable. He expected to report further on the case at a later date.

Dr. H. C. Ballenger presented a paper entitled "A Study of One Hundred Cases of Suspected Chronic Nasal Accessory Sinus Disease with a Report of the X-ray Findings," from which he drew the following conclusions:

1. The chief difficulty in deriving the full benefits of the roentgenogram properly taken and developed is (a) reading the plate; that is, determining the presence or absence of abnormal shadows or outlines. (b) Having properly interpreted the plates the correlation of these findings to the clinical data obtained. To do this the various modifying conditions mentioned in the paper must be considered.

2. The X-ray is a valuable supplement to clinical diagnosis and when so combined, error in diagnosis is reduced to a minimum.

3. Valuable surgical information can be gained as to the presence or absence, size, shape, depth, etc., of the sinuses.

4. Thickenings of the mucous membrane of the sinuses due to former operations, infections, irritations, etc., will produce a cloudy appearance or an indistinct outline of the sinus in the plate.

5. As a guide to the post operative progress the X-ray is of little assistance in the chronically diseased sinuses.

6. The X-ray is usually essential to determine the fact that the involvement is confined to certain sinuses, sinus or part of a sinus.

DISCUSSION.

Lt. Col. Wishart said that in his experience in cases of polyp of the antrum there was no shadow in the antrum; that is, where there was a pedicle arising from the outer wall of the antrum and passing into the nasal fossa, without any nasal involvement or considerable involvement of the antrum wall.

Dr. H. W. Loeh got the impression from the essayist that he could read a radiogram for diagnostic purposes much better than he could. He found that everything except anterior views were of little value. He had not been able to detect a difference in the shadows made by abnormal and normal sphenoids by an anterior view. He had thought that if a picture could be taken from the palate side it might show differences, but it was only about two years ago that he succeeded in getting a radiographer who would take enough interest to experiment with it. By means of a thick celluloid film they succeeded in showing the succession of sinuses very well, but did not have a pathologic case that showed anything until about six months ago. In that case they succeeded in getting a fairly good view of the infected sphenoid. He thought this method would also show pus in the ethmoid. He did not believe that it was possible to detect anything by any lateral view, and considered an anterior view of the sphenoid of no value as far as such differentiation was concerned.

Dr. E. L. Kenyon said that such beautiful x-ray work was done in respect to the teeth that it had been a question in his mind whether for the ethmoidal cells a small film might not be introduced into the middle meatus and the ray passed in through the orbit. There seemed to be nothing impossible about this and it would give a true picture of the ethmoidal region.

Dr. A. M. Corwin asked Dr. Ballenger whether he had checked up these plates with the ordinary method of transillumination. Both of these methods had been unsatisfactory at critical times in his experience and he wondered what Dr. Ballenger's experience had been in following both procedures in this series.

Dr. Robert Good said regarding the cases that were filled with mucus or polyps in the sinus where the radiograph was negative, if transillumination was used a positive result would be obtained. He thought transillumination was of more value than the x-ray in many of these cases.

Dr. Ballenger referring to the case of polyp in the antrum, said he could not prove it came from the antrum, but the pedicle had to what he assumed was the naso-antrum opening. It might have come from the ethmoid. In reading a series of plates there was frequently an element of doubt. Usually with exposures at various angles one could arrive at a fairly definite conclusion.

In answer to Dr. Good, he stated that transillumination had not been made as a routine method in these cases. He had not a great deal of faith in transillumination except when negative unless the transillumination revealed a dark antrum on one side and the visual examination revealed pus emerging from beneath the anterior portion of the middle turbinate on the dark side. Barring that he believed little value was attached to the procedure.

CHICAGO OPHTHALMOLOGICAL SOCIETY

A regular meeting was held March 17, 1919, with the President, Dr. William L. Noble, in the chair.

GUMMA OF THE IRIS

Dr. N. C. Nelson exhibited a young man with a tumor of the iris which was diagnosed as a gumma. Patient had been placed under treatment with mercurial inunctions and the iodids, and the gumma had begun to disappear.

Dr. Noble asked how long it was since the iodids were begun, to which Dr. Nelson replied about two and a half weeks.

XERODERMA PIGMENTOSA

Dr. Nelson also showed this patient, stating that the case really did not belong to this department except that one could see the thickened condition of the lower lid, the ectropion and the cornea generally be-

came ulcerated. In other words, there was an ulcerative keratitis. The condition was known as xeroderma pigmentosa and generally began in the very young. It began between six months up to four or five years. The pigment resembled very much freckles which appeared on the exposed surfaces, such as the face, neck and extremities. The pigment became deeper, and a little later on there was a warty appearance as was seen in this case, and still later ulcers developed. The tendency was for this condition to take on the malignant epithelial type. The prognosis was generally fatal. The sun and wind were the causative factors of this condition.

As far as treatment was concerned, there did not seem to be any outside of palliative treatment.

Up to 1870 there had not been many of these cases noted and reported, but between that time and 1910 there had been less than 100 cases recorded in the medical literature of the United States.

Dr. Alfred Murray stated that in Fuchs clinic, where over 20,000 new cases were seen annually, only two of the type presenting the condition described by Dr. Nelson were seen by him during the year that he was there; showing the rarity of this very interesting pathological condition. These two cases were sisters.

Dr. Nelson stated that the body was free from pigmentation where it was not exposed to the wind or sun. There was pigment on the hand, but as one went above where the clothes protected the body this pigment did not manifest itself.

There were no more cases in the same family. Occasionally more than one case was known to develop in a family. One physician had reported seven such cases in one family of which there were thirteen members.

One characteristic about the disease was that if the epithelial growth began early, the termination was likely to be more rapid than when it began late.

HEMORRHAGE INTO THE VITREOUS

Dr. Carl O. Schneider reported the case of a man who had been hit in the eye with a pair of brass knuckles six weeks ago which caused considerable hemorrhage into the vitreous.

DOUBLE EXTERNAL PARALYSIS OF THE RECTI MUSCLES

Dr. E. R. Crossley showed a case of double external paralysis of the recti muscles that had been operated on recently by Dr. Woodruff, who resorted to the transplantation of the external half of the superior and inferior recti muscles. The man was struck on the back of the head about six months ago, shortly after which this paralysis developed.

ENUCLEATION OF THE EYEBALL UNDER LOCAL ANESTHESIA

Dr. Austin A. Hayden read a paper on this subject in which he stated that local anesthesia, since Koller introduced cocaine in 1884, had been the procedure par excellence in nearly the entire realm of ophthalmic surgery. Today general narcosis was not uniformly employed in eye operations except on the very young and extremely nervous patients; in septic conditions, where injections might carry infection to other tissues; in extensive plastics and in enucleations. In some of the last named the use of chloro-

form or ether might be so dangerous to the life of the patient as to be almost absolutely contraindicated. Local anesthesia then became a matter of necessity. A most satisfactory result in a case of this sort had prompted the presentation of his paper.

After detailing an interesting case in which he enucleated the eyeball under local anesthesia, he referred to the advantages or indications for local anesthesia in general:

1. Dangers and complications of general anesthesia are entirely eliminated. Among these are the immediate dangers, such as respiratory and cardiac failure, chloroform and ether poisoning and shock, as well as remote complications, such as post-operative and hypostatic pneumonia, myocarditis, nephritis, etc.

2. It is impossible to remove the wrong eye.

3. No preparation is needed so that the operation can be done at once, and it is not necessary for the patient to be purged or starved.

4. No assistant is necessary.

5. The surgeon is relieved entirely of worry in regard to the patient's life.

The contraindications of local anesthesia are few:

1. Extreme youth or extreme nervousness on the part of the patient, the latter also probably on the part of the operator.

2. Purulent conjunctivitis and panophthalmitis, where theoretically a dissemination of the infection might result from injection of the anesthetic solution used.

3. Ruptures of the globe from panophthalmitis.

The author quoted extensively from the literature favoring enucleation under local anesthesia.

DISCUSSION.

Dr. Alfred N. Murray stated that Uthoff in Breslau had done a great many enucleations under local anesthesia. After the muscles were released, he injected the cocaine solution into the region of the ciliary nerves at the back of the eyeball through a long curved needle. The patients were able to talk to him during the operation and complained of no particular pain. The results were excellent. He did not think of giving a general anesthetic except to young children and nervous people, and ordinarily the patients came through without any trouble whatever.

Dr. Thomas Faith stated that for a number of years Dr. Fisher and Dr. Hoffman had both done a number of enucleations under local anesthesia. Dr. Hoffman preceded the local anesthesia with H. M. C. He had personally done a few enucleations under local anesthesia, but the technic described was one that he had not followed. In injecting the muscle attachments no attempt was made to penetrate the globe. He believed that the administration of the H. M. C. facilitated the work. He had done a number of enucleations with the aid of this combination under local anesthesia in patients who were so nervous that he was unable to do the work with local anesthesia alone, and yet they were patients to whom he did not wish to administer a general anesthetic. In his last case he resorted to the use of apothecin, a local anesthetic produced by Parke, Davis & Company, and said to be of no value except for injection into the tissues. It is of no value as a local anesthetic when applied to the mucous membrane. The result was satisfactory. The H. M. C. given according to instructions. The first injection was usually given an hour before the operation and the second one was given half an hour before the patient was put on the

operating table. Towards the close of the operation the effect seemed to be a very satisfactory, and the patient experienced no pain whatever when the nerve was out. Deep injections were made with two per cent. apothecin, the same as subconjunctival injections into the muscle sheath, and no cocaine except four per cent. solution was used and that was instilled at the beginning. One could use large quantities of apothecin; as much as two ounces had been given subcutaneously for extensive superficial operations and no deleterious effects ensued.

Dr. H. J. Smith asked why the essayist did not use novocain, which he thought was safer for the patient if he wanted to use any quantity. The injection should be made in the loose tissue of the orbit. Unless one placed the cocaine solution very accurately he could hardly accomplish his object without using too much. With novocain one could infiltrate the entire orbit and cover the ground very well and at the same time keep within the bounds of safety.

He also asked Dr. Hayden why he injected cocaine into the vitreous chamber. There might be a reason for this, but it was not apparent to him.

Dr. William A. Mann said he had operated on two cases and was pleased with the operation. He did not think it necessary to go through the eyeball to anesthetize the tissues back of the eyeball. As those same tissues could be reached by rotating the eyeball after the recti muscles had been cut. In the two cases on which he had operated the pain was not entirely relieved, although if he were to have the operation done on himself he would prefer local anesthesia to ether unless there was very marked sensitiveness of the ciliary nerves.

Dr. Hayden, in closing, stated in regard to the use of hyoscin, morphin and cactin, and that it properly came between local and general anesthesia, but he could readily see how it would be a distinct help for any local anesthetic procedure that might be attempted. Of course, the hyoscin was a powerful toxin and even in small quantities should be used very guardedly, and he did not know whether the use of those drugs together with this cocaine that was employed was a good thing if a satisfactory degree of anesthesia could be obtained by the use of cocaine alone.

As to the penetration of the globe, he simply wanted to try it. He figured it out this way: It was perhaps easier to penetrate the globe and reach the terminations of the ciliary nerve that lie around the optic nerve instead of going back of the ciliary ganglion along the path of the external rectus muscle. There was a difference in depth of about an inch. The ganglion was located nearly two inches back, whereas going straight through the globe the termination of the same nerves could be reached fully an inch further forward. It seemed to him that puncture and counterpuncture of the globe was attended by absolutely no risk, although he had only done this in one case. It was apparently quite easy to strike the sclera just to the temporal side of the optic nerve, and on the second injection to strike it just to the nasal side of the optic nerve by rotating the needle about fifteen degrees.

Dr. Martin, from South Dakota, who happened to be in Chicago at the time witnessed the operation, and he felt that the severance of the optic nerve would be attended by great pain. So far as the speaker knew, the optic nerve itself was absolutely insensitive, but the terminations of the small nerves just before they perforate the sclera which lie close to the optic nerve were sensitive. This was what was meant when reference was made to dividing the optic nerve and saying it might be attended with a considerable amount of pain. It was not the pain from the cutting of the optic nerve itself but the ciliary nerve branches in the vicinity. Lastly, if he was unfortunate enough to have to do many of these operations he would resort to local anesthesia.

Enucleations were routinely done under local anesthesia, as Dr. Murray had remarked, in certain (notably in Paris) European clinics. More and more of these operations could be done here in America, especially in selected cases, with great advantage to patient and operator as well.

Dr. William L. Noble asked Dr. Hayden if he thought with a plus three tension he could have manipulated the

eye with the cocain anesthesia without pain if he had not opened the sclerotic and reduced the tension?

Dr. Hayden, in replying, stated that he had the feeling the intraocular injections could not have been made without causing great pain unless the tension was first reduced.

In answer to Dr. Smith, he stated that there was no particular reason for the injection of the cocain inside the globe except this: The chances were it would be rather slowly absorbed into the circulation from the globe cavity, and that it was at least not dangerous if given in this location. In the second place, there might have been some chance of reaching the region behind the nerve through the return ciliary circulation.

(To be Continued.)

Patient—"Doctor, let me know the worst."

Doctor (absent-mindedly)—"Your bill will be \$200."

"Why don't you get an alienist to examine your son?"

"No, sir! An American doctor is good enough for me."

FULTON COUNTY

The twenty-second annual meeting of the Fulton County Medical Society was held in the auditorium of the Y. M. C. A. building at Canton, and was called to order at 2 p. m. by President Oren.

Drs. C. E. Axline of Bryant; R. P. Grimm of Farmington and C. J. Johnson of Canton were elected to membership.

Dr. Adams presented a report for the fee bill committee.

Necrologist Stopp's report on the death of Dr. W. D. Nelson, Jr., was read by the secretary.

The treasurer presented his annual report showing \$143.61 on hand.

The following officers were elected: President, Dr. E. P. Coleman, Canton; first vice-president, Dr. Jennie W. Parks, Cuba; second vice-president, Dr. R. P. Grimm, Farmington; secretary-treasurer, Dr. D. S. Ray, Cuba; member of board censors, Dr. H. T. Baxter, Astoria; delegate to state meeting, Dr. J. C. Simons, Norris; alternate to state meeting, Dr. P. S. Scholes, Canton; member legislative committee, Dr. W. E. Shallenberger, Canton; member public health committee, Dr. C. D. Snively, Ipava.

The proposed fee bill was amended to read one dollar per mile instead of seventy-five cents. Fee bill as amended was adopted and the secretary was instructed to have it printed and a copy mailed to each member of the society.

Dr. R. E. Adkins of Springfield gave an interesting clinic and talk on tuberculosis.

Dr. E. P. Coleman gave an interesting talk and demonstration on a much wounded soldier on "Practice in Evacuation Hospitals in France."

Miss Mattie Havermale gave notice of a Child Welfare convention to be held in Canton Oct. 30 and 31st.

The board of censors reported that they had examined the books of the treasurer and found them correct.

Twenty-nine members and three visitors were present.

D. S. RAY, Secretary.

MADISON COUNTY

Our September Meeting

The Madison County Medical Society met in St. Jacob on Tuesday, September 9, 1919, with President Chas. R. Kiser in the chair. Twenty-three members and twenty-five visitors were present.

The transfer card of Dr. W. W. Haven, of Granite City from the St. Clair County Society, was presented and on motion was referred to Board of Censors.

The death of Dr. Joseph Pogue being announced the following were named as a committee on resolutions: E. W. Fiegenbaum, W. H. C. Smith and E. C. Ferguson.

On motion of Dr. W. H. C. Smith, the Society voted to contribute \$15.00 a month to the support of Annetta Mehl at the Harrison Tuberculosis Colony, beginning with the month of August. Also to contribute \$60.00 a month for the support of Mrs. Parris, an indigent patient at the same place, until further notice.

The report of the Director of Survey was read and Miss Helen A. Heighway read the report of her work up to September 1. After some discussion both reports were ordered filed.

Dr. Chas. G. Schmidt, of St. Jacob, presented a case of complete transposition of all the thoracic and abdominal organs, which proved very interesting.

Dr. John Leo Tierney, of St. Louis, delivered an instructive address on "Arterio-Sclerosis." A vote of thanks was tendered.

The wives of the doctors in St. Jacob served elegant refreshments in abundance, and the doctors furnished cigars, for all of which a vote of thanks was extended.

On motion adjourned.

PERRY COUNTY

At the last regular meeting of the Perry County Medical Society in Pinckneyville, Oct. 1, 1919, Doctor Ralph S. Sabine of Murphysboro gave a very interesting and profitable address to a goodly number of the profession.

Doctor Sabine recently returned from overseas duty where he endured the hardships of war. He was with the medical force at the front and it is not only a pleasure to listen to his experiences but well worth our time to consider his observations.

J. S. TEMPLETON, Secretary.

ST. CLAIR COUNTY

The October Meeting

The St. Clair County Medical Society met in regular session at 8:00 p. m., October 2, with twenty-two members and two visitors present.

Minutes of September meeting as published in the *Bulletin* were approved.

Committee of arrangements for the meeting of the Southern Illinois Medical Association reported having secured a meeting place in the council chamber in the city hall, and asked for time to perfect other arrangements.

Committee on "fees" were not ready to report a conclusion of its work.

Dr. C. W. East, chief of the Division of Child Welfare of the State Department of Health, addressed the Society on the subject of "Infantile Paralysis," and upon the advantages of a "clinic" for crippled children. The doctor dwelt with particular emphasis upon the fact that the "treatment" of this class of cripples is one of "education," or of "re-education," and pointed out the fallacies of some of the methods in vogue.

Dr. Boyd moved that the Society go on record as favoring a clinic for crippled children, and requesting the aid of the State Department of Health in its establishment. Motion carried without opposition.

Dr. Arbuckle moved that a rising vote of thanks be tendered Dr. East for the excellent address, and all arose.

Among those discussing the remarks of Dr. East were Drs. Campbell, Arbuckle, Hill, Lane, Rendleman, Tharp, and Spannagel.

A question arose as to the possible number of crippled children in East St. Louis, and upon inquiry it was found that the members present at the meeting could name nine, and from this it was concluded that in the city there would be not less than thirty who would need treatment.

Dr. East expressed himself as well pleased with his reception, and promised that a "clinic" would be established.

A communication from Dr. Drake, director of the State Department of Health, relating to the probabilities of another epidemic of influenza, and asking for "volunteers for service at any place where an epidemic might appear and where the local profession is inadequate." The appeal met with no response from the members, the feeling being that if the epidemic reappears this city would be in need of aid as much as any place in the state.

Society adjourned.

C. W. LILLIE, Secretary.

Personals

Dr. F. E. Inks has removed from Polo to Princeton.

Dr. O. J. Sloan has removed from Chatsworth to Bloomington.

Dr. C. F. Harmon has returned from service overseas to Springfield.

Dr. Wm. Yeates after service in the army has removed from Bonfield to Bloomington.

Dr. C. D. Center is secretary and business manager of the chamber of commerce in Quincy.

Dr. Arthur R. Edwards, Chicago, has returned from his summer home at Squirrel Island, Me.

Dr. Lewis J. Pollock announces the resumption of practice at 25 East Washington Street, Chicago.

A bold yeggman frisked Dr. E. S. Spindel's trousers of cash recently. No, they were "on a chair."

Dr. E. A. Gray of Chicago held a clinic on diseases of the lungs at the Congregational church in Byron, October 21.

Dr. Arthur W. Stillians has been appointed head of the department of dermatology in Northwestern University Medical School.

Dr. Joseph De Silva, Rock Island, is reported to be seriously ill at St. Anthony's Hospital, Rock Island, suffering from septicemia.

Dr. Roscoe C. Eaton has been discharged from the military service and has been appointed chief surgeon for Libby, McNeill and Libby.

Dr. M. H. Rosenberg was lured to a hotel room in Chicago when a bandit attacked him. The doctor was beaten but kept his valuables.

Dr. Frank J. Oshay of Ladd was fined \$225 and committed to jail at Princeton for practicing medicine after his license had been revoked.

Dr. Warren F. Pearce has returned to Quincy after twenty months service in the navy, part of the time as fleet surgeon and chief medical officer of the port of Brest.

Dr. Wilson R. Abbott, Springfield, October 6, succeeded Dr. Leo J. Jacobson as clinician to the Cook County traveling health clinic of the Chicago Tuberculosis Institute.

St. Mary's hospital board of East St. Louis gave a complimentary dinner to the city physicians for their cooperation during the past. Dr. C. W. Lillie reports it a most enjoyable occasion.

Dr. Rudolph J. E. Oden, who has recently returned from Cadillac, Mich., has been appointed attending surgeon to Augustana Hospital, and consulting surgeon to U. S. P. H. S. Hospital No. 2.

Dr. Walter H. Meents, Chicago, for the last six years instructor in surgery in Rush Medical College, has recently been appointed assistant

professor of surgery in the University of Illinois College of Medicine.

Capt. Bellenden S. Hutchinson, V. C., Canadian A. M. C., medical officer of the 75th infantry, a practitioner of Mound City and Chicago, who served for four years with the Canadian Forces and is said to be the only American born officer to receive the Victoria Cross, the highest award for bravery in England, is on leave and visiting friends in Chicago and in Mound City.

Dr. and Mrs. C. U. Collins entertained Dr. and Mrs. W. J. Mayo of Rochester, at Peoria, October 17, at the Creve Coeur club. Dr. Mayo had been cruising down the Mississippi in his steamer, the Minnesota. Other guests attending the affair are members of the Central Illinois Surgical club, Dr. and Mrs. Mammen, of Bloomington; Dr. and Mrs. Carl Black of Jacksonville; Dr. and Mrs. George N. Kreider of Springfield; Dr. and Mrs. George Edmondson of Clinton; and Dr. and Mrs. R. A. Hanna of Peoria.

News Notes

—Winnebago County physicians who served overseas were guests of honor at a smoker held by the County Society, Oct. 14, at Rockford.

—The State Psychopathic Institute has been removed from Kankakee to Dunning where it will be located until the new buildings are ready in Chicago.

—The Sisters of St. Elizabeth's Hospital, Danville, entertained the forty physicians of the staff, who had served in the war, at an elaborate banquet, October 16.

—It is reported that the Stephenson County Medical Society voted in favor of collecting a fee of \$1 for each birth and death certificate signed by the members.

—Members of the Peoria County Medical Society gave a dinner at the University Club, October 7, in honor of the members of the society who served in the army during the great war.

—The twenty-six medical service men of Vermilion County were honored by a banquet given by the Vermilion County Medical Society, in Danville. Dr. Jasper M. James, Henning, president of the society, presided as toastmaster.

—A building for the exclusive use of physicians is to be erected in Rockford by J. Frank Deuel. It will cost about \$15,000 and will be equipped with a medical library, drug and medical supply rooms, and garage accommodations.

—The Cook County traveling health clinic of the Chicago Tuberculosis Institute, during the last four months, has visited thirty-six towns, and has held 111 clinics at which 841 persons have been examined; of these, 352 came for examination of the chest.

—Thirty-one members of the Sangamon County Medical Society who served in the world war were guests of honor at a banquet given by several professional brethren at the St. Nicholas Hotel, Springfield, September 23. Dr. John W. Kelley, was toastmaster.

—In the suit brought by Mrs. Dell Nichols against Dr. Daniel A. K. Steele, in which \$50,000 damages was claimed because of alleged loss of voice, said to have been due to a surgical operation by Dr. Steele, the jury in the superior court, October 11, brought in a verdict in favor of Dr. Steele.

—The Ogle County Medical Society held a meeting at Leaf River, Oct. 15, which was addressed by Paul Hansen, chief sanitary engineer of Illinois, on "The Sanitary Problems of Small Towns and Rural Districts." Dr. E. F. Murphy of Dixon gave an address on "Acute Abdominal Lesions."

—At the West Side Branch of the Chicago Medical Society held at Cook County Hospital, Thursday, October 16, the following program was given: (1) Where Are We Drifting? Dr. Charles J. Whalen; (2) Medical Organization, Dr. Warren Johnson; (3) Business and a Profession, Mr. Robert J. Folonie.

—A great many chemicals for the production of which America was formerly entirely dependent upon Germany are now being successfully produced in this country. Two important pharmaceutical products, derived from coal tar and our entire supply of which formerly came from Germany, are creosote carbonate and guaiacol. American chemical works are now prepared to supply all demands for these products.

—Dr. John Weathersson, Assistant Professor of Medicine in the University of Illinois, has resumed his practice in Chicago. Dr. Weather-

son was one of the very few physicians who was an infantry "line" officer in the late war and who commanded fighting troops at the front in France. Since leaving the Army last spring, he has been attending the Harvard Graduate Medical School and doing special work in the Massachusetts General Hospital.

—Northwestern University has secured an option on 9 acres of land on the lake front at Chicago Avenue on which it is planned to erect within ten years buildings for its departments of medicine, dentistry, law and commerce, these buildings to cost approximately \$1,350,000. It is expected eventually that on the medical school alone \$2,500,000 will be expended. To carry out these plans the university has begun a campaign to raise \$25,000,000, half of which it is expected will be obtained by June, 1920.

—The Loyola University School of Medicine, Chicago, announces the following changes in its faculty: Dr. Louis D. Moorhead, Chicago, has been appointed acting dean; Dr. Samuel A. Matthews, Mobile, formerly professor and head of the department of physiology and pharmacology at the University of Alabama, has accepted a similar position at Loyola; Dr. Andrew C. Ivy of the University of Chicago has been appointed associate professor of physiology; Dr. Elmer S. Maxwell, formerly of Vanderbilt University, Nashville, Tenn., has been appointed assistant professor of bacteriology; Dr. Frank M. Phifer, Chicago, has been appointed professor and acting head of the department of genito-urinary surgery, and Dr. Frank B. Lusk, Chicago, becomes supervisor of medical instruction in the dispensary.

Marriages

ARTHUR CLYDE TAYLOR, to Miss Adele G. Williams, both of Wilmette, Ill., September 30.

JOHN B. WICKENSIMER, Steger, Ill., to Miss Gertrude Marie Gormley of Chicago, September 20.

DELON RICHARD NOTBOHM, Warren, Ill., to Miss Matilda Heller Horn of Coplay, Pa., October 2.

JAMES HARRY VETTER, Chicago, to Miss Gertrude Chase Colwell, of Rutherford, N. J., September 22.

Deaths

ALBERT CLEMANS RHEL, Lowell, Ill.; University of Illinois, Chicago, 1894; died at his home, September 28.

NICHOLAS RE, Chicago (license, Illinois, 1886); aged 68; died at his home, October 13, from valvular heart disease.

JEPHTHA D. KNOTT, Monticello, Ill.; Hahnemann Medical College, Chicago, 1883; aged 58; died at his home, September 12, from diabetes.

CHARLES E. LAMON, Fairmount, Ill.; Rush Medical College, 1865; aged 82; for thirty years a druggist of Fairmount; died at his home, September 29.

MARTIN L. DORMAN, Taylorville, Ill.; Kentucky School of Medicine, Louisville, 1875; aged 79; died at his home, July 10, from inflammatory rheumatism.

BRINSLEY COLLINS GRAVES, Cisco, Ill.; Missouri Medical College, St. Louis, 1885; aged 67; died at the home of his brother in Sturgeon, Mo., September 8, from cerebral hemorrhage.

FRANCIS M. SMILEY, Kewanee, Ill.; Rush Medical College, 1879; aged 60; a Fellow A. M. A.; a specialist in diseases of the eye and ear; died in his office, September 15, from cerebral hemorrhage.

JAMES WILSON CORMANY, Mount Carroll, Ill.; Miami Medical College, 1873; aged 70; also a dentist; at one time mayor of Mount Carroll; died in Los Angeles, September 10, from cerebral hemorrhage.

ADRIAN REGINALD KARREMAN, Chicago; University of Michigan, Ann Arbor, 1888; Rush Medical College, 1889; University of Illinois, Chicago, 1890; aged 51; a member of the Illinois State Medical Society; was murdered at his home in Chicago, September 29.

ROBERT AGEDIUS KROST, Chicago; Northwestern University Medical School, Chicago, 1905; aged 29; a Fellow A. M. A.; assistant professor of pediatrics in his alma mater, and attending pediatrician to Wesley Memorial Hospital, Chicago; died in that institution, October 4, from septic pneumonia following an abscess of the nose.

HARRY ANDREW SULLIVAN, Rockford, Ill.; Marquette University, Milwaukee, 1913; aged 31; a Fellow A. M. A.; who went overseas as first lieutenant, M. C., U. S. Army, with Surgical Unit No. 1, saw service in the Verdun sector, and was honorably discharged, July 8, 1919; formerly a well known pitcher of the St. Louis National League; died at his home, September 22, from pneumonia.

JAMES BURRY, Chicago; Northwestern University Medical School, Chicago, 1879; aged 66; a Fellow A. M. A.; for many years, chief surgeon of the Illinois Steel Company; and surgeon of the Elgin, Joliet and Eastern Railroad; who served as captain in the Medical Reserve Corps, U. S. Army, and was honorably discharged March 27, 1918; one of the pioneers in roentgenray work in the Middle West; was found dead, October 16, on the Illinois Central tracks.

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Original Articles

MEDICAL ORGANIZATION.*

WARREN JOHNSON, M. D.,
CHICAGO.

In presenting this paper I have nothing new to offer, but welcome the opportunity to tell an old story, and hope that through this repetition of a few grievances of the profession we might be aroused to some definite plan of organization, whereby we can practice our chosen profession with pleasure and credit to ourselves, and with greater service to the public.

My own personal experience in organization has been limited, but I have been impressed with the economic side of medicine to which I have devoted considerable time, and have come to the conclusion that it is about time for the medical profession to diagnose its own economic disease, and become organized into a strong healthy economic body, capable of commanding the respect of every other organization of society.

The reasons why we should be well organized are known to all of us, but I would like to go over a few of them in detail.

First is that the medical profession in its altruistic devotion to the public is about to pauperize itself. The doctors are the only class of workers in any field of human endeavor who compete with each other to the point of giving their personal services to the public without pay. As the doctor is on the same economic basis as all other workers, this practice can not continue without a pernicious reaction upon both the physician and the public. The physician will of necessity be pauperized to so large an extent that he can not afford the things necessary for his development, the profession will go backward as it has in Germany and England since the establish-

ment of free medical services in those countries, and the public will lose the high class services they are now getting from the physician in this country.

The doctor has proven his worth to the community, and the public should not expect him to devote his life to the cause of humanity without being compensated for his efforts. The progress we have made in sanitary science, serology, etiology, pathology, symptomatology, diagnosis and treatment of diseases, in the past thirty-five years, has doubled the average human life, and given health and comfort to many who would have been invalids without the aid of the profession.

Thirty-five years ago the average human life was twenty-two years, today it is forty-four years and as the wealth of a community is proportionate to its health, one could safely estimate that half the wealth of the country is due to the united efforts of the doctor, and in spite of this fact there are among us many good men who are making but a bare living, because the doctors as a class are not organized sufficiently to demand a just portion of their earnings.

The poor are entitled to and should have free medical services, but the burden of this responsibility should not be placed upon the medical profession, because they are poor themselves, and can not afford to work for nothing.

The doctor who takes care of a charity patient, whether in a dispensary, hospital, home or office, should be adequately compensated for his services, through funds coming out of the general taxation and not through health insurance, contract practice or industrial insurance.

Health insurance robs a man of his own self-reliance and self-respect; it kills initiative and puts a worker on the same level with an inmate of a poorhouse or penitentiary, encourages malingering and pauperizes the doctor, because both the patient and the doctor are at the mercy of the insurance companies. Contract practice is unde-

*Read before the West Side Branch of The Chicago Medical Society, October 16, 1919.

sirable because the doctor is never adequately compensated for his services, he is overworked and underpaid, and must take cases away from the family doctor, because the patient has no choice of doctors.

This sort of practice will ultimately eliminate the family doctor, judging from its heavy taxation on his income at the present time.

Large corporations are capitalizing the work of the doctor through contract practice, their employes being treated in their homes and in hospitals to so large an extent that compared to ten years ago it is rare when the family doctor gets the opportunity to treat a patient who works for a corporation. Corporations are paying as high as six dollars to ten dollars a day to laborers, while the doctor works for the same corporation for an average salary of from one hundred to one hundred and twenty-five dollars a month.

The cheapest labor employed by the City of Chicago is "Common Labor" for which they pay an average salary of twelve hundred and sixty-five dollars a year; next cheapest is the doctor whose average salary is fourteen hundred and twenty-seven dollars a year; the police, firemen, clerks, skilled labor, engineers, inspectors, janitors, and other classes of workers, all are paid more than the doctor. Some of these doctors are sent to our schools to pick out the children in need of medical and surgical treatment.

These children are then turned over to a nurse employed by the department to take them to a dispensary where they are treated by a doctor who gets no pay for his work.

In many cases the parents of these children can well afford to pay a doctor for his services.

The free dispensaries other than those used for teaching purposes are in strong competition dealing in free medical and surgical services to patients. They can well afford to do this because they pay nothing for the services they cause to be distributed. Among these organizations might be mentioned the Red League, the Red Cross and the United Catholic League. Everybody who does anything for these organizations except the doctor, gets paid for his services, but don't blame the organizations because the doctors themselves are to blame.

Medical legislation as it has been defended by our present medical organizations is a failure so far as the organizations are concerned. We have

been very fortunate to have in our profession such men as Dr. Whalen, Dr. Humiston, Dr. M. L. Harris, Dr. VanDerslice, Dr. J. V. Fowler, Dr. J. C. Krafft, and others, who have sacrificed their practice, time and their own money to go to Springfield and use their influence to prevent medical legislation vicious alike to the profession and the public.

This individual effort and sacrifice on the part of these men is noble indeed, and we owe them all the encouragement and gratitude that it is possible to bestow upon them, but this is not enough to compensate them for their work, and the least that the medical societies could do for these men on the public relations committee, would be to pay their expenses while they are working for the interests of the organization they represent. Furthermore, the medical societies should pay a salary to a man in Springfield, to do nothing else but take care of the interests of the profession.

If these things were done and a little time and money were spent to educate and cooperate with the public, we might in time have the same laws that are now imposed upon the physician, compelling every individual who practices the healing art in any form to take the same rigid examinations in etiology, pathology, symptomatology and diagnosis of diseases. As the laws stand today, a six weeks' course in most any cult, or pathy, is all that is necessary to practice, and treat any disease without exception, so long as you do not practice medicine or surgery.

Such a state of affairs can not be spoken of nor thought of without condemnation, because all of us know that through this kind of practice, many human beings lose their health, happiness, and lives, which could have been saved by a correct diagnosis and treatment.

The public is not to blame for this because they do not know any better, we are to blame because we do not educate the public, and because we are not organized sufficiently to have much influence with the men who make the laws.

Hospital standardization is another problem for us to solve, because it is essential that hospitals should be standardized so that the doctor might give his best services to his patient. They should be standardized by the rank and file of the profession however, and not by a few self-appointed, would-be reformers in our profession who will attempt to standardize them to the ex-

clusion of the practitioner, and to their own autocratic monopolization of all the hospitals in the country. Unless something constructive along this line is soon done by the profession, I fear that the time is not far off when the practitioner will not be permitted to open a boil unless he be a member of the American College of Surgeons.

The Harrison Narcotic Law is another sore spot on the body of the medical profession. Time and experience have shown that it does not prevent the drug habitue from obtaining his favorite drug, and by the same test it has proven to work a hardship on the honest doctor. We are penalized for the wrong doings of dishonest doctors and other illegal dealers in narcotics.

As a matter of principle, a doctor should be permitted to prescribe and administer narcotics to a suffering human being whenever his judgment dictates, without having to go through a lot of red tape to do so, and paying a fee of three dollars a year for the privilege.

As we face the situation under the Harrison law, it is my opinion that every doctor who takes out a license to prescribe and dispense narcotics is under suspicion by the government of being a crook, until its agents have proven that he is not so. This law would never have been passed if we had been organized to defend our rights.

Our scientific organizations are incomparable in the work they are doing for us in the scientific field of medicine, and let us hope that they will always continue to hold the place they so well deserve, as a scientific body, but as to their economic value to the profession they are a failure. A failure indeed through no fault of their own, but because their purposes and their finances do not permit them to do more, and yet the American Medical Association spends a great deal of time, space and money on their propaganda for reform, exposing Lydia Pinkham's Compound, Thedford's Black Draught and other good for nothing nostrums.

But it seems to me that this is wasted energy because their propaganda reaches only the physician, and the public keeps on buying the stuff just the same.

If the American Medical Association would spend half the time and money that they do on this propaganda campaign towards solving some of the real economic problems of the physician, something might be accomplished.

The Illinois State Medical Society has done very little to put the profession on a solid economic foundation, but it does do a great deal for us through its annual meetings, and its monthly journal.

The Chicago Medical Society, with its three thousand six hundred members, the largest city or county medical society in the world, furnishes us every year with a complete post-graduate course in all the up-to-date advancements of the profession, it gives us protection from malpractice suits, admits us to membership in the Illinois State Medical Society, and the American Medical Association, pays for the monthly journal of the Illinois State Medical Society, and establishes us in our community as ethical physicians and surgeons. What more could one expect for five dollars a year? The membership fee is too small to ask them to do more than they are now doing.

In summing up the situation of medical organization, I am convinced that there is room for an organization of physicians whose sole purpose is to work out the economic and social problems of the physician.

In Europe such organizations have been established for years, especially in the Scandinavian countries, and they have done good work. The same is true of like organizations in some of our own American cities, and especially in New York by the Medical Economic League.

The Physicians Fellowship Club has been organized in this city for the same purpose, and in my opinion it will be through such an organization that our economic problems will be solved, even if it has to affiliate with the American Federation of Labor to do so.

We can not expect without co-operation with all classes of workers, and especially with the small registration fees of our present organizations, ever to accomplish much from an economic standpoint, but the time will come perhaps when the doctor will see that in order to help himself, he must co-operate with all other classes of society and support his economic organization as loyally as does the carpenter, bricklayer, hod carrier and all other organizations of workers. Then, and only then, can we ever expect to pull ourselves out of the mire that we have been led into by our unselfish devotion to the practice of medicine.

3201 West North Avenue.

OF THE WORLD AS WELL AS IN IT*

ROBERT J. FOLONIE

General Counsel for Illinois Medical Society,
CHICAGO.

An active and intimate association with membership of medical societies of this state for many years past, has wrought a deep-seated conviction that the members of your profession have been in the world of affairs but not a part of it. Such a state of affairs is not entirely unnatural, and frequently occurs among members of the learned professions. It is a standing joke, constantly appearing in so-called comical journals, that a college professor is absent minded, that his wearing apparel is readily distinguishable from that of other members of society by its lack of conformity to common standards, and the utter inattention of a college professor to the ordinary affairs about him is a truism. To only a slightly lesser degree is the same thing true of your profession and to some degree of my own.

A student who undertakes medicine during his college days constantly associates with other medical students, and the subject of their conversation is very largely the affairs peculiar to their own profession. After entering on the practice of his profession, the physician ordinarily seeks his associations with other physicians, and the more earnest he is in his work the more likely he is to bury himself in the scientific investigations in the medical field to the exclusion of affairs not bearing directly on the business in hand. With a few rare exceptions, the routine of a doctor's life consists in scanning the gossip in the morning paper, perhaps reading the baseball scores, visiting the rounds of his patients, meeting patients in his office, and, in his leisure times, discussing matters relating to his profession with his office associates, who are physicians or dentists, reading medical journals or medical books; in the evening for relaxation, attending meetings of medical societies to which he belongs and occasionally going with his family to places of superficial amusement. The natural consequence of this manner of life is to narrow the physician's life so that his thoughts and speech and viewpoint on everything are limited largely to his medical education and experience.

It has come sharply to my attention, in late

years, that those who are interested in selling wildcat stocks and bonds find their richest field among professional men and preferably physicians. A physician who is too wary to be caught by these schemes as a rule does not make enough of a study of the subject to differentiate a wildcat scheme from a legitimate one, so in an effort to be conservative he avoids all stocks and bonds, and, in the city, usually invests his spare money in an apartment building, and, after making a payment on it, determines to pay off the remainder out of the earnings of his building. In the majority of cases he finds, to his astonishment, that instead of the building carrying itself, he is compelled to constantly drain his earnings in his profession to keep from losing the property entirely; gets into difficulties on renewing his mortgage, has to put a second mortgage on it, and, in a fair proportion of cases, loses all that he has put into the venture. He bewails his bad luck and never comes to a realization that the real trouble with him is that he is not properly educated.

For a physician to properly invest his earnings, he must have some knowledge of investments, and, additionally, he should have resort to those who make a business of investments and secure their advice before making investments. The very nature of his activities is such that he cannot master the subject of investments thoroughly and to use proper judgment, he must have the advice of a banker or investment man to keep him straight. My experience is that, as a rule, a physician is quite bashful, due to his lack of contact with the affairs outside of his business, and his judgment is readily overcome because of his bashfulness and his failure to take a proper stand is because he is not sufficiently informed to know what his proper stand should be. He cultivates and prides himself on the high ideals of his profession, and, in connection with these high ideals, acquires false ideals on the order of the English barristers, who, in olden times believed that it was unbecoming the dignity of a lawyer to bargain for his services, or to take money from his clients, for he was an officer of the law and therefore above money grabbing. To solve this problem they wore gowns with a pocket in the back, into which the grateful client was expected to drop his donation, and doing so behind the lawyer's back, it would come

*Address before Physicians' Fellowship Club, The West Side, North, North Shore Branches of the Chicago Medical Society, October, 1919.

as a great surprise to the lawyer to find the donation in the pocket. Our profession very happily has outgrown this spirit. We have put our profession on a common sense basis of charging a reasonable fee, requiring it to be paid before we render service. We have long ago discovered that to make a routine charge for time is not just, for one client has a matter of trivial importance for which the fee should be nominal, and another client consumes the same amount of time with a matter, ill advice on which would cause irreparable damage, and upon which proper advice would prove of large profit to the client; for the same amount of time devoted the charge ought justly to be very much larger.

There is no real reason why a physician undertaking a course of treatments, a surgical operation or a matter requiring extreme skill and unusual attention, should not have the fee agreed upon in advance and have the fee upon a basis dependent upon the skill required and the gravity of the condition in hand, and the fee much larger than would be the case if a mere two or three dollar charge for visits was in contemplation. There is no reason why a physician should not demand a retainer from a patient who will be under his care for a considerable time, and for the physician to make no charge, or demand nothing from the patient until the service is completed, and then, through carelessness, wait a month or two in sending a bill and then send statements irregularly for a few months more and still not get the money, has no genuine excuse in modern days. A physician properly conducting his business ought to have a bookkeeper, and if his practice does not permit, and he has offices with a number of other physicians, they ought jointly to employ one; a substantial fee ought to be collected when the service is commenced; if it goes over a long period, other payments on account should be requested; when the service is complete a proper statement should be immediately forwarded by the bookkeeper and followed up by a proper follow-up system, to see that it is cared for with promptness.

Within the last few months I have had two claims from doctors for collection which both present a great likelihood of never being collected. One was a service rendered to a married woman, separated from her husband, and making her home at the time with her father. The woman had no means and the father was well-

to-do, as the physician knew. There was good reason for him to judge, from the character of attendance required, that the family was not of the highest standard. The physician attended this case throughout without receiving fees, sent a bill to the father, who refused to pay, because he was not legally obligated for his daughter's debts, and the daughter, of course, was hopeless, so far as collection of the bill was concerned. In this case, the father should have been required to sign a written promise to pay for the treatment, with a substantial payment in advance; otherwise, treatment should have been refused.

In another case a prominent oculist had a bill against a concern which sent an employee for care of his eyes. They sent their shop foreman with the man. The man has no means and doubtless cannot pay. The employer now contends that the shop foreman was merely rendering a friendly service to the injured man; that promises of the shop foreman do not bind them; that if they are bound at all, the limit of their liability is the limit fixed by the compensation law for medical attention, which is an entirely inadequate amount for the service rendered. A substantial part of this bill should have been exacted before undertaking this case at all; a letter should have been had from the employer undertaking to pay for the entire service, and unless both of these were forthcoming the case should have been refused.

The fact that a physician commonly undertakes the case and apparently has no interest whatever whether his bill will be paid or not, accounts for the fact that the laymen will ordinarily pay any bill he owes in preference to a physician's bill. The physician's attitude leads him to believe that the physician is above money grabbing; that it really is not a matter of very much importance to the physician whether he gets his money or not. In fact, it is a gift, anyway, and not a payment of something owing.

A physician ought to read the financial page of his newspaper every day and if he must leave part of the paper unread, leave the sporting news out, although it is preferable to read that too. He should be informed on the affairs of the world so that he may know what others are doing, why they are doing it, and to know something about the world in which he lives and of which he ought to be a part.

I have had occasion, in the last year or two, to

appear at Springfield a number of times with respect to various bills presented to the state legislature, and I have been startled by the lack of interest of the medical profession in its own business, and the common feeling among physicians that somehow or other things will work out all right; that they are too busy, attending their patients, to pay any attention to these matters which are foreign to them. Judging by the relative activity of the osteopaths and physicians, the legislatures in this day are warranted in believing that there are two hundred times as many osteopaths in this state as there are physicians. They are constantly presenting new amendments to the medical practice act. They are an active lot who keep themselves conspicuous all the time and they are opposed by less than a half dozen physicians who take it upon themselves to defend your profession from the constant assaults being made on it. The physicians are so uninterested that when a communication is sent to them it requires explaining the nature of the bill which is before the legislature, what effects it will have if it passes, and then the physician is rarely informed on who the legislator in his district is so that the committee has to inform him of the name and address of the legislator. So he will entirely understand what is wanted of him, a form of letter is outlined for him to send and when the letter is sent to the physician it is three chances out of four that he will pay no attention to it whatever. I have not the slightest hesitancy in saying that with the lack of interest of your profession in anything except the particular malady of a particular patient you happen to have at the time, that there is only one way to take care of you and that is to have a paid lobbyist to take care of your interests. The work of volunteer committees has been as well done as could be expected under the circumstances, but you will need a great deal more. During the last year a bill was presented which would prohibit any one from doing nursing who had not passed a prescribed course and had a prescribed qualification, including high school education; all of which with the dearth of nurses at the time would have handicapped your profession so badly, I do not like to think what might have happened to you had the matter become a law when proposed. There are many laws more vicious than that one, and I only mention it as the one most readily coming into my mind as the one which almost got through the legislature.

I urge you, individually and collectively, to broaden, modernize and enliven your business sense. You are alert within the purely scientific field but your horizon is too limited.

SOME DIFFICULT DIAGNOSTIC SURGICAL PROBLEMS*

D. R. CONNELL, M. D.

Surgeon to the Beloit General Hospital,

BELOIT, WIS.

Modern surgical technique with its boundless possibilities have opened up large new fields for the surgeon, and no matter what his experience or study many conditions still remain in the dark as to the exact diagnosis and proper medical or surgical treatment.

The modern equipment such as the Roentgen-Ray, etc., have instead of simplifying the work opened up new fields and new possibilities to be explored and conquered by the modern up-to-date master surgeon.

Probably the darkest field in the surgery of the human body (with the exception possibly of the brain and its meninges) is the abdomen itself, and with its thousands and thousands of competent operators and able diagnosticians, it still remains the great diagnostic battle ground. We will only attempt to touch on a few of the many serious complications that seem to puzzle the surgeon and try to illustrate the pathology by history of cases as we proceed to describe some of the common symptoms.

The common acute surgical diseases of the abdomen line up in about the following order: First, appendicitis; second, the liver and its ducts, including the gall bladder and the pancreas; third, ectopic pregnancy; fourth, ulcer of the duodenum or the stomach, and fifth, strangulation of the intestine, including thrombosis of the mesenteric artery.

Diagnosis is difficult, often impossible, but a great necessity and should be honestly sought. Let me emphasize the greatest aid of all—an aid that is generally poorly utilized—the history. "Let the patient tell his story, tell it in his own words and in his own way and you be the judge of the importance of the symptoms as told by your patient." All other methods, such as direct examination, x-ray findings, etc., are very im-

*Read at the Tri-State District Medical Society, Dubuque, Iowa.

portant, but must follow a correct history to be of any great practical value.

Case 1. Mrs. S., aged 40 years, appendectomy two years previous. Infection followed in the abdominal wall, a ventral hernia the outcome. One year from this operation a second operation for repair of the post-operative hernia, successful. Health apparently perfect for the following year. Suddenly seized with pain in the abdomen, constipation, vomiting, and all the signs of intestinal obstruction. Various remedies tried until the vomiting became bilious and then fecal. Operation urged and accepted. The writer saw the case as she lay in a hovel in the rear of a telephone office, too sick to be moved to a hospital some twenty miles distant. Diagnosis: obstruction and an exploratory operation performed in her extreme condition. Found a mass of black intestines in the incision, which proved to be fifty-eight inches of the small intestine. Gangrenous portion (58 inches) removed and the two ends of the gut sutured into the peritoneum, exactly as the old operation for drainage of the gall bladder. This looked to us at the time as the wisest and only course to pursue in view of her extreme condition. Patient improved and was removed to the hospital in a week. Eight weeks from this operation when her condition was fair, her abdomen was again opened and an anastomosis made from the ileum to the transverse colon with a Murphy button. Recovery uneventful.

What caused the trouble? No doubt she was a victim of a complication not very uncommon, ranking about fifth among the acute surgical diseases of the abdomen, an ileus, caused in this case by a thrombosis of the mesenteric artery, which is a branch of the abdominal aorta. You know, of course, that the superior mesenteric is an end artery and supplies the small intestine and a serious and fatal condition when thrombosed. *What are the symptoms?* Pain the signal, like the pilot light to the captain, pain continuous, different from other hollow organs, relieved somewhat by treatment but always continuous. Nausea followed by vomiting, abdominal distension with the abdomen tympanitic and no bowel movement, except possibly a little from the rectum. Procrastination here meant death, and the early operation brought its own reward. Recovery and a life saved.

Case 2. Mrs. N., aged 34 years. Pain in left side for a number of years past. Three children living, youngest four, miscarriages two. Trouble began three years ago following a miscarriage. Pain always in the left side, low down. Taken suddenly sick at 12:00 o'clock at night with severe pain and the doctor that saw her relieved it with anodynes and hot applications. Kept the case under close observation; a well trained up-to-date physician who knew the danger of

abdominal diseases. The next morning symptoms increased with the addition of rapid abdominal distention. Patient removed to the hospital at once, writer saw the case. Operation advised and accepted. A median incision disclosed the fact that she had an ileus fifteen inches in length which was beginning to show evidence of a gangrenous process. The gut was collapsed for about sixteen inches in its length. What was there to do for her? Our first intention was to resect the flattened intestine and with a view of further observation applied hot towels and waited for results.

The bowel quickly recovered its normal size and tone and looked practically normal with the exception of two spots probably as large as a pea, which showed a gangrenous process. These spots covered with a purse string suture and the cause of the ileus sought. This proved to be a ruptured left pyo-salpingitis with its attendant inflammation, etc. Removal of the left tube and ovary and the abdomen closed. Patient given the usual post-operative treatment and went to recovery without any further trouble.

Now the question naturally arises what do we mean by an ileus? The term does not signify any pathology. It means a train of symptoms consisting of pain, nausea and vomiting and a failure of the bowel to move its contents onward. As soon as we understand that an ileus is a syndrome and not a pathology we have made a good start toward the comprehension of this strange but not uncommon trouble.

In both patients the abdomen was distended. In spite of the treatment the vomiting and nausea continued and became distinctly offensive. Both patients had enemas and a bowel movement obtained. One bowel movement does not, however, rule out intestinal obstruction. Both patients were extremely ill. Both patients readily accepted the advice of their doctor to seek surgical aid and both were rewarded by a complete recovery.

Now what are the symptoms? Vomiting, first mucous, then bile and then fecal matter. Tympanites, constipation, pain and shock. Early operation holds out the only hope and should be urged and performed and the pathology in all cases sought and corrected.

Among the difficult surgical diagnostic problems standing somewhere near the head of the class in importance (probably about third) is the threadworn subject, extra-uterine pregnancy. A mortality of about twenty-five per cent. if left on the expectant or medical and a death rate of practically nothing if submitted to the early surgical treatment.

Case 3. Mrs. B., married, aged 35 years; two children, youngest eleven. History of two or three accidental abortions. Menstruation practically absent for two months, leaking blood some of the time. Taken suddenly sick at night, pulse quickened but temperature normal, pain not severe, case watched the first twenty-four hours, apparently no surgical indications. Sudden collapse at the end of the first twenty-four hours, skin cold, marked collapse, pulse increasing, temperature subnormal. Diagnosis: internal hemorrhage, probably a ruptured extra-uterine pregnancy. Operation advised and accepted. Abdomen opened and found full of blood caused by a right sided ruptured ectopic pregnancy. Recovery uneventful.

Now the case could not be correctly diagnosed nor the seriousness foretold earlier or anything left to do but an exploratory incision, and had this patient died criticism would follow probably along the following lines: First, should the patient be still kept under observation until the shock subsided? Second, should the operation be delayed until the diagnosis was more apparent? A few years ago it would look like madness to attempt surgery on this case on account of shock, etc. There is no doubt in my mind that this treatment was proper and a mother of a family saved.

Case 4. Aged 20, married three months. Has had attacks of pain in her abdomen since early childhood. Taken suddenly sick on a farm six miles from the city and examined by two well known, level headed general practitioners, case given medicine and watched. Seen by Doctor No. 3, who elicited the history of pain, absence of menstruation with the exception of a beginning flow from the vagina, temperature normal, pulse slightly elevated; diagnosis, ruptured extra-uterine pregnancy and the patient moved to the hospital for operation. She improved in the night while waiting to be operated on with other cases in the morning. Examined by the writer, could find absolutely nothing abnormal except tenderness over McBurney's point and the history of this explosion two or three days before. She looked like a recurring attack of appendicitis and with this in view the operation advised and accepted. The doctor who entered the case still insisted that she had a ruptured extra-uterine pregnancy and gave the anesthetic. Operation by the writer, an incision over McBurney's point found the peritoneum black from the blood underneath. Abdomen full of blood from a left sided ruptured extra-uterine pregnancy. The tube removed and also the appendix, which was abnormal, followed by rapid and satisfactory recovery.

What are the symptoms of a ruptured extra-uterine pregnancy? Absence of menstruation, something abnormal, such as leaking of blood from the vagina, something of a morning sickness, suddenly sick with pain in the abdomen followed

by nausea with temperature normal or sub-normal. The very picture of an acute attack of appendicitis with the fever, the fourth symptom missing.

In fact, the cases brought to the hospital are seldom diagnosed correctly; only an odd one diagnosed before the rupture and in some of them the pathology not even suspected. This is not alone common to the attending doctor, but to myself as well. Fortunately they have other symptoms which make the abdominal work necessary and are operated on with a mortality something below one or two per cent.

Case 5. Mr. D., aged 45 years; laborer. Nothing unusual in the early history except an occasional colic during childhood; had one severe attack of pain in the abdomen about ten years before my examination in May, 1916. Marked tenderness and rigidity in left side under the costal margin with considerable pain over the entire abdomen. A walking patient but unable to work. Several severe hemorrhages from the intestines as evidenced by large quantities of blood in the stools. The radiograph seemed to show an obstruction at the sigmoid and diagnosed by the radiologist as an obstruction at that point, probably malignant. The writer refused to operate on that diagnosis and the patient drifted to one of the greatest surgical centers in the west who verified the finding and supposed he had a malignant trouble and sent him home to die. He was again examined in our office upon his return and an exploratory laparotomy advised and accepted. An incision six to eight inches long on the left side over the supposed obstruction, a long appendix found attached to the descending colon coming from the right corner. Appendix removed, nothing more could be found abnormal. After a diligent search through an ample incision, liver normal, stomach and duodenum seemed normal, spleen not enlarged, no obstruction or growth in the sigmoid regions. Patient's abdomen closed the usual way, left the hospital in twenty days practically well. Received no medical treatment while in the hospital or since leaving the hospital except the usual post-operative treatments, anodynes, cathartics, etc. Patient made a splendid recovery, has gained twenty or thirty pounds and works every day as a day laborer and in addition manages a pop corn wagon evenings and Sundays to give himself the proper exercise.

Now the question naturally suggests itself, could any man diagnose or even suspect the pathology in this case without seeing the real conditions? What relation did this adherent appendix have to this hemorrhage; certainly the cause as evidenced by the complete return to normal strength and health after its removal.

Case 6. Reported by Dr. Bevan in *The Surgical Clinic* of Chicago for April. This patient has had for six years repeated severe hemorrhages from the

bowels. These have not been associated with pain. Although she has been under most careful observation for a long period, the cause of the hemorrhage has not been demonstrated. The patient is a married woman of forty-six, a patient of Dr. Frank Billings. The hemorrhages have occurred at intervals and have been so severe that after some attacks the hemoglobin would go down to 40 per cent; the bleeding had been going on intermittently for six years. There was no evidence of carcinoma. X-ray examinations with barium injection in the colon were negative. Proctoscopic examination was negative and for some time it was felt that the bleeding must be due to some constitutional condition and that medical management was indicated. However, as the condition persisted without relief, Dr. Billings suggested that an exploratory operation be made. When Bevan analyzed the facts he thought that he was dealing with a polypus in the colon and ventured that as the most probable diagnosis. Operation, exploratory incision in midline, a most careful examination of the alimentary tract was made. The large bowel was empty and contracted, the sigmoid was examined and no lesion of any kind could be found. The cecum was contracted. The appendix was large and contained a large fecal stone at the junction of the appendix and the cecum. The stone seemed to project into the cecum. The rest of the intestinal tract from the stomach down was carefully examined but nothing found except the large appendix as described. The appendix was removed. The patient made a good recovery from the operation and has had no evidence of hemorrhage since that time.

My own case operated on and reported about a year ago and Bevan's case reported in the April number teach us that the subject of appendicitis and its complications is not yet fully interpreted and that the last word is still to be spoken regarding the correctness of the diagnosis of this familiar disease.

Case 7. Mr. T., aged 35 years; pain in the abdomen of an obscure character, something like ten years. Diagnosis: appendicitis by his doctor some five years ago and the appendix removed. The post-operative result was perfect, recovery without relief of symptoms, that is, the symptoms remained the same. The history as elicited in our office recorded the fact that he had several hemorrhages from the stomach in the last three or four years. He was referred to the radiologist who verified the findings of an ulcer at the pyloric end of the stomach. Operation advised and accepted. Operation by the writer. Posterior gastro-enterostomy in the usual way. Ulcer not located, evidently small and of the bleeding variety. Patient rallied from the operation. No trouble whatever until the third day when he sank and died, evidently having bled to death from the old ulcer or from the operative wound or from the traumatism to the mucosa of the stomach or intestine caused by the enterostomy clamps.

Considerable can be said regarding post-operative hemorrhage from this operation. Continuous cat gut suture in the intestine and stomach seems to be sufficient when properly and carefully placed to prevent post-operative hemorrhage in these cases and seems to be more desirable and safer than the interrupted suture as recommended by a great many surgeons today. Murphy, who stood alone in his class as a teacher, all by himself and the greatest of them all, taught that the button had a feature known to no other device—the complete control of post-operative hemorrhage. Coffee of Portland, Ore., just recently reports a death from hemorrhage on the fourth day caused by an ulceration of the mucosa of the stomach caused by the traumatism of the clamps used in this operation.

Case 8. Mr. C., aged 38 years; veteran of the Spanish war, sick in the tropical climate and returned with some abdominal symptoms, diagnosed by one of the level-headed doctors of Rock County as appendicitis and operation advised and performed. Recovery from operation perfect. Recovery without relief. Symptoms remained the same. This operation was performed about five years ago. Naturally the symptoms developed more fully of late years. Seen by a friend of the writer about eight months ago and a duodenal ulcer suspected. The radiograph showed an ulcer in the duodenum near the pylorus. Operation advised. Operation by the writer seven months ago. Posterior gastro-enterostomy with a continuous cat gut stitch for the mucosa and a linen continuous stitch for the serous surfaces. Patient showed no symptom post operative, gained rapidly and was in the office of his physician a day or two ago, eats well, can eat anything, feels well and has gained some fifteen or twenty pounds in weight.

What about the diagnosis of an ulcer of the stomach or duodenum? First, the history—pain, a great symptom in abdominal diseases caused by obstruction of the hollow organs, such as the appendix, gall ducts, ureter, etc., lacking in ulcer because the stomach and duodenum are not closed organs. Even in an advanced duodenal ulcer the stomach can empty itself through the mouth. Therefore, when the pain is of a severe colicky nature the trouble can be looked for outside the stomach and duodenum. Pain occurring immediately upon taking food if accompanied by vomiting is due to a reflex condition outside the stomach. Pain occurring with periodic regularity between meals, especially if relieved by food, points to a disease of the duodenum or stomach and especially an ulcer. Not pain but discomfort, gnawing and burning in the epigastric re-

gion and generally the right side, distress when the stomach is empty and about two or three hours after meals, relieved by the dilution of the gastric contents, relieved by rest, especially lying down, low abdominal pain one day, umbilical pain the next day, etc., etc., point strongly to a disease of the pyloric end of the stomach or duodenum. Second, nausea, hemorrhage, etc., of little consequence. Third, Roentgen-ray examination carefully done and properly read of great value and indispensable, and should be certain in seventy to ninety per cent of all ulcer cases. Fourth, analysis of the stomach contents ranks a poor fourth and unless confirmed by other tests practically of no value.

What is the treatment of gastric and duodenum ulcers? Other things being equal, after failure of reasonable medical treatment, if there is such, patients with unhealed chronic ulcers should be considered surgical. To evade the operation is a risk not commensurate with the value received from operative interference. The writer firmly believes that in the chronic ulcer of the pylorus and especially the duodenum where signs of obstruction are evident a gastro-enterostomy, if properly done in properly selected cases, will give results fully as certain as other operative interferences in other parts of the body with a very low mortality.

In closing this paper I wish to quote a few lines written by that nobleman of the west, W. J. Mayo of Rochester, no doubt the greatest stomach surgeon the world has ever known, who says:

A study of the history of the natural course of a chronic duodenal ulcer makes the prospect of permanent cure by medical means open to question. I have seen a number of so-called medical cures and have not been able to determine that there was any material difference between them and the spontaneous remission. The ulcer as far as the Roentgen-ray evidence is concerned shows no physical change in the period of improvement. In operating during this period, no sign of healing is found. By means of alkalis, restricted diet, frequent feeding, largely milk and cream, whereby chemical corrosions are controlled, patients with chronic duodenum ulcers are relieved. A remission of the symptoms being secured and maintained for an indefinite length of time but such patients can not be looked upon as cured unless they can go back without a recurrence of trouble to the regular diet of the grade and character obtainable by the average man. As a matter of fact relapses usually take place under such circumstances and the dangers of perforation and hemorrhage are ever present.

Now in conclusion when we figure the curious phenomena connected with the duodenal ulcer and in fact gastric ulcer—its intermittency, a cessation more or less complete in the disease after a period of some weeks of symptoms, and the patient goes on for months without any knowledge of his ailment. This is exactly true of gall stones and appendicitis and our medical men twenty years ago were fighting us surgeons because we would not believe they were permanently cured. Now then again the symptoms of ulcer appear and again the remissions until finally obstructions or carcinoma come on the ground or the patient dies from perforation, starvation or hemorrhage. All these facts lead the trend of advice toward the surgical treatment of gastric and duodenum ulcer with a hope of a permanent and satisfactory cure.

ABDOMINAL EMERGENCIES.*

D. J. TWOHIG, M. D.,
FOND DU LAC, WIS.

The name of this paper is self-explanatory and the responsibility which rests on those to whom the management of these cases is intrusted is no doubt familiar to all. There probably is no other class of conditions that bring the general practitioner and surgeon together so frequently as abdominal emergencies. There is probably no other class of cases in the life of the general practitioner, consultant, internist or surgeon that calls for such rare judgment and prompt intervention. Practically all injuries and acute diseases of every nature are first seen by the general practitioner and upon his decision depends the early diagnosis and consequently the treatment whether medical or surgical, and I might add frequently the prognosis may rest entirely in the method of procedure he chooses to follow. It is in this class of cases that the late John B. Murphy of Chicago coined the well-known remark: "He who procrastinates is lost."

I am thoroughly aware that the general practitioner cannot always prevail upon the laity to do what in his judgment should be done, also that the means of transportation may be such that this patient can not be moved to the hospital or surgical help may not always be obtainable and consequently delays of varying degrees are unavoidable.

*Read before Tri-State Medical Society.

There is also another class of cases where he is not called upon until the patient is well advanced in some serious condition and he is called as a court of last resort. These are unfortunate conditions but they exist, nevertheless, and will continue to exist until the laity is so educated that they will not take such desperate chances.

There are a few general suggestions that I wish to enumerate and that I believe are of the greatest importance in handling these cases as well as arriving at a proper diagnosis and instituting correct treatment:

First. Moderation in the use of morphin and better still, none at all, absolutely none until your diagnosis is made and an understanding as to the treatment to be pursued.

Second. That persistent pain is the most important single symptom that surgical interference is needed that we have.

Third—That a clear, complete, concise and accurate clinical history is necessary for an accurate diagnosis.

Fourth. That severe cathartics aggravate the condition and should not be given.

Fifth. That in gangrenous conditions there is a quiescent stage between your first acute symptoms and your later symptoms of general peritonitis that must always be considered in making your diagnosis.

Sixth. A blood count should be made early in all cases.

Seventh. That an absolute diagnosis is frequently very difficult and sometimes impossible even by the most proficient diagnostitian, but a surgical diagnosis can always be made and proper treatment instituted.

Now I wish to review some of these emergencies separately and I will begin with injuries to the abdomen and I wish to divide them into two groups: perforating injuries which include gunshot wounds and non-perforating injuries, that is where the external violence is great enough to possibly cause an injury to some abdominal organ.

The perforating and gunshot wounds are usually taken to a hospital immediately and, as a rule, the proper treatment carried out, the abdomen is opened, hemorrhages checked, and if there are perforations of the stomach or of the intestines, they are repaired and if other injuries or lacerations of the spleen, pancreas, liver or other organs, they are taken care of. There is one condition that is frequently overlooked in this

group of injuries and that is if there is any possibility of perforations extending into the lesser peritoneal cavity, it should be examined and drainage instituted if needed. The patient is given a prophylactic dose of anti-tetanus serum and proper after treatment carried out.

The other class of injuries, or as I have termed them, the non-perforating injuries, do not always get the prompt attention that they should, as there seems to be a tendency, especially among some men to procrastinate in such cases and wait eventualities. There is also a tendency to administer to those patients a dose of morphin as they are usually suffering severely and it is this practice that I wish to condemn, as a dose of morphin in this stage may cover up your symptoms to such a degree that when the effects of morphin have passed away your patient may be beyond surgical relief. This I think I can illustrate best by citing a couple of cases that I have had the good fortune to observe recently: The first, a girl twelve years of age was kicked in the abdomen by a horse. A doctor was called and finding the girl suffering severely and in a state of shock, he administered a dose of morphin which relieved her suffering. The next day there was evidence of a general peritonitis and I was called to see the patient and immediately removed her to a hospital, opened the abdomen and found two lacerations in the descending colon together with a general peritonitis from which the girl died a few hours after the operation. The other case, a boy sixteen years of age who was thrown across a desk on his abdomen. He was severely shocked for a time, was removed to his home and as shock subsided, he had severe pain. A doctor was called who administered a hypodermic of morphin, after which he rested quietly until the next day. The next day about ten o'clock in the morning I was called in consultation and found him dying. He was dead before eleven and I did a postmortem on him immediately and found his small intestine torn entirely in two.

I could enumerate numerous other cases of this character if time would permit. These cases I present to you to impress the necessity of getting a clear, complete and concise history as to how accident happened and also to condemn most emphatically the use of morphin in those cases until after your diagnosis is complete.

The proper procedure to follow in these cases is this: 1st, get a clear, complete and concise his-

tory; 2nd, absolutely no morphin; 3rd, watch closely for evidence of internal hemorrhages and if there is any evidence of an internal injury, do not hesitate to operate immediately.

The next subject I wish to bring to your attention is acute appendicitis. One would think there is no occasion to mention such a well-known subject, but the fact remains, nevertheless, that patients with gangrenous and suppurative appendices are being registered at our various clinics every day, and not infrequently have those patients been under medical attention for some time. While this condition prevails the subject needs consideration.

Then given a mild attack of appendicitis which starts with colicky pains in the abdomen, nausea, possibly vomiting, slight elevation of temperature, leucocytosis and local sensitiveness in right lower quadrant of abdomen all within the first six to ten hours. Twelve hours later pain and temperature may be gone entirely. What has happened? Is the patient recovering or has the appendix become gangrenous? If the appendix has undergone complete gangrene it ceases to be painful because its nerves are dead. It produces no elevation of temperature and perhaps no leucocytosis because absorption of the products of infection are not possible through dead mucosa.

The next symptoms you may have are those of a local or general peritonitis with its accompanying grave prognosis. This is a condition that we have all witnessed. Then what is the remedy? Advise an operation in every case of acute appendicitis, not later in the day, not tomorrow or some other day, but now. Stand by your diagnosis and your conscience and have every case operated on at once.

Now I wish to say a few words regarding the operation. An acute appendicitis without pus requires a very simple operation and is easily done and is practically devoid of danger, but a suppurative or gangrenous appendicitis with a local or general peritonitis is a real emergency and in regard to this operation I wish to speak.

The customary procedure in those cases is to remove the appendix if possible and drain the abscess or general peritoneal cavity. The common complication which follows this procedure is that in two or three days the patient is distended with gas which obstructs the drainage, they begin to show symptoms of obstruction and it occasionally is necessary to operate again and tap the

bowels to relieve the distention; this is always a grave procedure and frequently fatal.

Some years ago it occurred to me that if something could be done at the first operation to overcome the gas distention of the bowel it would greatly improve the chances of those apparently hopeless cases of suppurative gangrenous appendicitis, with general peritonitis, consequently I have devised an operation which I think meets the requirements of the condition which keeps the bowels free from gas. Consequently the abdomen remains flat and the drainage is not obstructed by distended intestines, intra-abdominal adhesions and the probability of post-operative hernia are lessened.

The technique of this operation is as follows: Remove the appendix in the usual way, insert into the cecum through the lumen of the appendix a soft rubber catheter which is fixed to stump of appendix and brought out through abdominal wound, directly draining the bowel, but most important allowing the gas to escape. Balance of operation the usual procedure.

The next subject I wish to mention is: Perforation of the stomach or duodenum. This is a very important condition to recognize early as the only treatment of any value is operative and the prognosis depends entirely on our ability to recognize the condition and institute the proper treatment. The prognosis of gastric or duodenal perforations operated on within the first 18 hours is good, fair until about the 24th, and very poor thereafter. Then what are the symptoms that guide us to a correct diagnosis and proper treatment.

1st. Pain which is characteristic in its sudden onset, intensity and limitation to the upper abdomen.

2nd. Shock usually severe with all its symptoms especially where perforations are sudden and complete with escape of a large amount of gastric contents into abdomen.

3rd. The early and progressive development of board-like muscular rigidity. This rigidity coming on very early, usually within one hour and is very intense in character. There are only two conditions which produce the same kind of rigidity, the first is acute hemorrhagic pancreatitis and the second perforation of gall bladder.

Acute hemorrhagic pancreatitis is indeed a very rare condition, and a careful history of the case will usually differentiate it from rupture of

the gall bladder. The surgical treatment consists of opening abdominal wall through upper part of right rectus muscle, locating site of perforation, trimming edges, suturing same and covering with a piece of omentum, putting suitable drainage into abdominal cavity and closing wound. Followed with proper diet until ulceration has healed.

The next subject I will bring to your attention is ruptured extra-uterine pregnancy which is also a very important subject and here again it is very imperative that we make an early diagnosis as we find it in women usually between the ages of 18 and 45.

In this condition you will always find a very characteristic history. You will be called to see a woman who may or may not give you a history of pregnancy. There are usually some indications of pregnancy; she will complain of pains in abdomen or pelvis and an irregularity of menstruation frequently of leaking of blood from uterus and vagina, this condition extending over a period of weeks or even months. Then she will be seized with sudden severe pain, bleeding from vagina and collapse. Many of these are mistaken for appendicitis and on operation proper treatment instituted. This is a mistake and should not be made, as I know of no condition that gives a clearer history than extra-uterine pregnancy.

Another emergency we must always have in mind is obstruction of the bowels. The characteristic symptoms of which are sudden intense pain, nausea and vomiting which becomes fecal, collapse and tympanites.

In intussusception it may be possible to palpate a tumor, but not always. It is more easy in children where this condition is more common than in adults.

Symptoms will also vary some, depending upon the location of the obstruction, but are very characteristic and should not be confused. Here again it is very important to have an early diagnosis made and prompt surgical treatment instituted if we wish to save the continuity of the intestine and avoid resections, which is the ideal result to be obtained in these cases.

If the circulation to a section of the intestine is obstructed or seriously impaired, resections are our only recourse and should be done when there is any question.

Another emergency I wish to mention, though it is not usually as sudden in onset as the preceding conditions and often presents a clinical history that should always put us on the right track. There will be, as a rule, a history of preceding attacks of gall-stone colics or digestive disturbances. The attack itself will begin with pain in the upper part of the abdomen, may be referred to back or even left side, followed by rise in temperature, leucocytosis and usually distinct tenderness in upper right quadrant of abdomen. I refer to suppurative cholecystitis.

If this condition continues it is usually possible to palpate the gall bladder. If it goes on to rupture you will get shock, intense rigidity of muscle and final collapse. The treatment is distinctly surgical.

There are several more abdominal emergencies not so common as those enumerated, but equally important, and in closing I will simply enumerate them as they should always be considered when dealing with abdominal conditions. They are thrombosis of mesenteric blood vessels, rupture of pregnant uterus, acute and hemorrhagic pancreatitis and the perforations that complicate such conditions as typhoid fever and tubercular enteritis.

I fully realize that it is impossible to give a complete and thorough description of such an extensive subject in the time allotted to me and am going to ask you to bear with me any shortcomings of this review.

DISCUSSION.

(Abstract.)

DR. TWOHIG (in answer to a question): The only cases in which I have left a tube in was in perforated or gangrenous appendicitis. In those cases I left a tube in to get direct drainage, but the greatest benefit accomplished by tube is relief of gas. But I see no reason why it cannot be used in other emergencies.

DR. SCOTT, Bedell, Iowa: I feel that to advise the use of morphin in this case is somewhat misleading because I believe that in quite a number of cases it is impossible to make a diagnosis and I believe that in cases in which we can usually make a diagnosis we should have the morphin and operation. Morphin should be given for shock and then after the operation. Why not give them the benefit of morphin for the shock and relief of pain and therefore materially assist in the result of the operation? In many cases the shock is so great that death would follow if mor-

phin was not given. A man fell fifteen feet off his wagon. Both wheels went over him. I had to give him a great deal of morphin to save the man's life. At the same time, he did not require an operation of serious abdominal difficulty. Injuries in that vicinity, as you know, are serious on account of the shock they produce. My suggestion is that morphin be given for the relief of shock and pain and that an operation follow where operation is known to be imperative. I would also like to suggest that all cases should not be operated upon but should first receive careful consideration.

DR. CAPPER, Genoa Junction, Wisc.: This paper appeals to the general practitioner. All these emergency cases which the doctor cited are first seen by the general practitioner, and if there is anything we are guilty of, it is procrastination. We cannot be too prompt in cases of this kind. We must have something done and done quickly.

DR. CUNNINGHAM, Platteville, Wisc.: A rectal tube will usually take care of the gas in the large bowel as well as the drainage of the appendiceal stump. The obstruction in these cases does not come from the distension, as a rule, of the large bowel. The real distension comes from the obstruction of the small bowel and that is usually due to the drainage tube and the packing being placed internally in the sacrum, so that the pressure and adhesions produce and form an obstruction to the ileum and the gas is not able to get from the small bowel into the large bowel. It is best to keep the tube or packing external to the caecum and eliminate the danger of pressure or adhesions.

DR. TWOHIG: Dr. Stannard asked in how many cases we had used this procedure of drainage of the stump of the appendix. I have not compiled statistics on it. When we began to do this about seven years ago, we did it only in the cases that we thought had absolutely no chance to get well, and they all began to get well. I was of the very same opinion as Dr. Cunningham as to the drainage of the large intestines until I began to use it. But as a matter of fact you will find that it does a great deal more than drain the large intestine. It drains the small intestine as well. It does more than anything else you can give to your patients to relieve gas. Practically all of the patients with the tube inserted in the appendix will go through the first 24 hours comfortably without any enema at all. Of course it is very important to get the drainage outside of the intestines. I would imagine we have used it in about 200 cases.

I have been asked if we did not get fecal fistula? If you do not destroy the circular muscles at the base of the appendix. Very seldom do you get any discharge of fecal material at all and in the number of cases we have done up to the present time, there have been no fecal fistula that have not taken care of themselves. The percentage of hernias that you will have after this procedure is about 75 per cent less than you will have with other methods of procedure.

STUDIES ON THE RELATION OF DUST TO THE SPREAD OF TUBERCULOSIS.*

H. C. SWEANY AND C. C. MACLANE.

CHICAGO.

Introduction. Long before the discovery of the tubercle bacillus there arose a controversy concerning the mode of infection of tuberculosis that is still unsettled. Some authors have claimed that tuberculosis is spread by the inhalation of infected dust; others, by the inhalation of droplets of moisture exhaled by consumptives; others, by direct contact, etc. It will indeed be interesting to know just what is the exact means of dissemination of tuberculosis and if there are several ways, what percentage of infections arises from each. It was considered highly expedient, therefore, to attempt a contribution towards the solution of the problem. The present work deals mainly with dust and its relation to tuberculosis.

Historical. It was Villemin¹ who first tried to transmit tuberculosis by forcing tuberculosis material into the tracheas of rabbits. His experiments, though crude, opened the way for a host of investigators, some of whom have performed very painstaking and elaborate experiments on the transmission of tuberculosis. Tappeiner² was the first to demonstrate clearly that tuberculosis is transmissible by inhalation. He produced tuberculosis in dogs by causing them to inhale a spray of an emulsion of tubercle bacilli. Following these came such men as Bertheau³, Weichelsbaum⁴ and a great many others who attacked the problem from various angles. Koch⁵ was greatly impressed by the work that had been done on inhalation infection, but he looked upon it from a different light than the others. His idea was that inhalation was the chief means of infection, but he considered that tubercle bacilli were inhaled with dust rather than by other means. It was known very much earlier that some bacteria can withstand drying and yet remain alive for months. Koch, therefore, reasoned that tubercle bacilli could dry in the dust and be wafted up by air currents into the respiratory passages where infection would result. Following up this idea, Cornet⁶ performed his now famous experiments. He injected guinea pigs with the sweepings of jails, asylums, dwell-

*Read before the Robert Koch Society for the Prevention of the Spread of Tuberculosis.

ings, etc., where consumptives were housed. The result of these experiments was that tuberculosis was not found unless a consumptive had occupied the quarters, and where open cases of tuberculosis dwelt a very high percentage of positive results were obtained. Out of a total of 147 samples of dust 46 were found to be positive.

Naturally, Cornet considered the problem solved—that is, that tuberculosis was spread by inhalation of dust containing tubercle bacilli. This idea pervaded the field for several years, until Flügge⁷ published his work. Flügge observed that the most experimental inhalation infections had been produced by moist sprays of tubercle bacilli rather than by dust or dried sputum. From this he concluded that infection will result rather from inhalation of moist droplets coughed out by consumptives than from dust. Accordingly, he performed a series of experiments over a period of several years, showing that bacilli may be coughed out by patients; that these droplets will float from sixteen to thirty-two inches, and that they will stay afloat for twenty minutes. Many other workers have taken up this work and showed the plausibility of Flügge hypothesis and tried to discredit Cornet's work. Chief among the Flügge school were Hyman, Neisser, Kerstein, Beninde and several others.

Of the recent workers Soparker⁸ has performed noteworthy experiments. His work consisted in experiments on the resistance of tubercle bacilli under varying conditions, such as sunlight, diffuse daylight, darkness, etc.

According to his results, tubercle bacilli will live twenty days in moist sputum; three hundred and nine days in the dark, five days in diffuse daylight in dust and two hours in direct sunlight in dust. His work shows clearly that sunlight is the worst enemy of tuberculosis.

Experimental. The experimental part of this paper deals with the work on dust at the City of Chicago Municipal Tuberculosis Sanitarium; the Cook County Jail, and control tests which were conducted at the above mentioned sanitarium. Dust from several dwellings were also worked up, but there were not enough cases worked on at the time of this paper to produce conclusive evidence. This work is being continued, I believe, under the direction of Dr. N. S. Graves, director of dispensaries.

Technic. Sweepings of dust were collected from the various rooms with new sterile brooms, placed in sterile paper bags and taken to the laboratory where the material was worked up as soon as possible. The samples were placed in centrifuge tubes, covered for twenty minutes with 3 per cent. NaOH to kill off most of the acute growing organisms as Petroff⁹ did in growing the organisms from sputum, because Corper¹⁰ showed that 3 per cent. NaOH for 20 minutes had little effect on the tubercle bacillus; then sample was centrifuged, the NaOH drawn off and the sediment washed with physiological salt solution to remove all the NaOH. This sediment was then divided into several portions and injected subcutaneously into guinea pigs. After three months, postmortems were performed and the organs were carefully examined for tuberculosis, both grossly and microscopically.

The sanitarium was divided into six classes of rooms according to the number of patients contained in each room. A table of the results was made accordingly.

TABLE 1.

Class of room	No. of Rooms containing		Positive results	Doubtful results	Negative results
	Number of Samples	Positive Sputum cases			
Operating Rooms.	5	0	0	0	5
Utility Rooms....	22	10	0	1	21
Porches	20	20	3	0	17
Cottages	17	16*	0	1	16
Double Rooms....	46	42	5	0	41
Single Rooms....	62	56	4	1	55
Total	172	134	12	3	155

*The unit building was included with the cottages.

Five samples of dust from the various operating rooms, including the surgical, obstetrical room, orthopedic, etc., were found to be negative to tuberculosis. Of twenty-two samples from the various toilets, bath rooms, halls, closets, dining rooms, etc., only one was found to be questionable for tuberculosis. That is, there were acid fast organisms found, but on reinoculation there was produced no tuberculosis. Of the porches, including the nursery, sun parlors, recreation porches and regular porches, each containing about eight patients, there were three positive samples obtained out of twenty. Each porch had at least five positive cases. Out of seventeen samples taken from the various cottages and unit building, where the ambulant cases were cared for, there was only one questionable result. There were five positive cases out of forty-six samples taken from the double rooms, where two

patients were cared for. Forty-two of these samples came from rooms where one or both patients were expectorating tubercle bacilli at the time the samples were taken. There were four positive and one questionable case out of sixty-two samples taken from the single rooms. Fifty-six of these rooms contained open cases of tuberculosis. Of a total of 134 samples where there were open cases of tuberculosis there were 12 positive, which is 9 per cent.

It is very interesting to note that of the twelve positive samples, seven were obtained from the north side rooms and five from the south side rooms. Of the five positive samples from the south side rooms three were obtained from the porches. Therefore, of the single and double rooms, there were seven positives from the north side and two from the south side.

The samples taken from the Cook county jail were treated the same as those taken from the sanitarium. Out of eighteen samples of dust taken from the various cells, bull pens, "hospital cells," etc., three gave positive results. One positive was taken from a room where the patient was known to have tuberculosis, the other two were not suspected beforehand.

Control experiments were carried out so that a definite idea could be gained regarding the resistance of tubercle bacilli under various conditions.

An emulsion of organisms was prepared and placed in a test tube in the direct rays of the sun when the rays were at an angle of 50 degrees. Samples were withdrawn at varying intervals and inoculated into guinea pigs. The results are tabulated below:

TABLE 2.

Time	2½'	5'	7½'	10'	20'	30'	60'
Findings	+	+	+	+	—	—	—

When the sun is at its average height it requires twenty minutes to destroy the organisms when they exist in an emulsion where the sun's rays could touch every part. Other experiments were performed where the organisms were placed in surroundings that were more like those found in the ordinary room. Some tubercle bacilli were mixed with sterile dust and placed in Petri dishes. One set was exposed to the direct rays of the sun at an angle of 50 degrees; one set was placed in a well-lighted south room, and the other in a well-lighted north room. The one

exposed to the direct rays of the sun required five hours to kill the organisms.

TABLE 3.

Time	30 min.	1 hr.	2 hrs.	3 hrs.	5 hrs.	7 hrs.
Results	+	+	+	+	—	—

The results of experiments conducted in the rooms were as follows:

TABLE 4.

Time	6 hrs.	1 day	2 days	3 days
North Room	+	+	+	+
South Room	+	+	+	+
Time	5 days	7 days	14 days	21 days
South Room	—	—	—	—
North Room	+	—	—	—

Several boxes of positive sputum were placed in absolute darkness at room temperature and the contents of the boxes injected every month to see how long the organisms would live in sputum.

TABLE 5.

Time	1 month	2 months	3 months	4 months
Results	+	+	—	—

The results obtained demonstrate two points very clearly; first, that in the rooms of tuberculosis patients there are given off living virulent tubercle bacilli, and second, that living virulent tubercle bacilli live for several days in the ordinary room used to care for tuberculosis patients. This work has not proved how many cases arise from dust laden with tubercle bacilli. That would indeed be a hard task to perform. In the first place, doses that are capable of infecting guinea pigs may be too small to infect many human beings, especially adults because most people apparently have a certain degree of immunity for tuberculosis. Then again, the infected dust may not reach the lungs, but may lodge in the upper respiratory passages, where the organisms are unable to set up infection. Furthermore, if the organisms do reach the lungs, the natural means of cleaning, such as cilia and mucus, may throw the organisms out before infection results. At best it would be hard to estimate the percentage of cases that can arise from tuberculous dust.

It is sufficient, after all, however, to know that there are living tubercle bacilli in the dust and on the walls of rooms occupied by open cases of tuberculosis. The bare fact that tubercle bacilli are present is indicative of grave danger. The virulence of the organisms found need not be questioned, because Corper¹¹ has demonstrated that 97 per cent. of tubercle bacilli from sputum are virulent.

Infected dust would be especially dangerous to

infants who crawl on the floor near the dust and who are at the most susceptible age for infection. In fact, Webb¹² has shown in one case that the infant is very similar to the guinea pig in susceptibility. Of course, this does not indicate that all infants are necessarily around open cases of tuberculosis. However, there must be some means of contracting the infection in early childhood, because most children show signs of infection before the age of five years. There is no doubt that many become infected through contaminated food and by direct contact.

The question of infection through other channels than the lungs may be of greater importance than is commonly thought. There may be some yet undiscovered way whereby the organisms may get into the system, because as Krause¹³ has reasoned, the lesions appear many times in the spleen and liver, as soon as, and with greater involvement than in the lungs. To get to the spleen it is evident, therefore, that the organisms travel either by the blood or lymph channels. It may be possible that the organisms travel from the tonsils, intestines or any other part of the body where the organisms may come in contact with the blood or lymph streams. The leukocytes, for instance, may engulf the organisms at the point of entrance and carry them to the organs of the body where conditions are most favorable for their growth. As apparent proof of this reasoning we may cite the fact all bone infections must result from some such means.

The experimental evidence in this paper indicates, also, that the organisms do not survive in south rooms as long as they do in north rooms. In the first place, the dust control tests survive seven days in north rooms, whereas, they survive only five days in south rooms, and second there were seven positive samples of dust in double and single rooms on the north side whereas, there were only two positive in the same class of rooms on the south side.

Another noteworthy fact is that there were a greater number of positive samples taken from the porches than from any other class of rooms. Since the porches are all facing south, there is only one conclusion that can be drawn, namely, that the greater number of open cases there are, the greater is the chance of finding the organisms. This is only what we should expect.

Summary. 1. Of 134 samples of dust taken

from rooms where open cases of tuberculosis were being treated, 12 were found to be positive.

2. Of 18 samples taken from the Cook county jail three were positive.

3. Seven positive cases were found in single and double rooms facing north, while only two were found in rooms facing south.

4. The greatest percentage of positive samples were found in places where the greatest number of open cases were being treated.

5. A suspension of tubercle bacilli in salt solution was killed in 20 minutes in direct sunlight with the sun's rays at an angle of 50 degrees; five hours in a film of dust in direct sunlight; five days in a film of dust in a south room, and seven days in a film of dust in a north room.

The authors wish to acknowledge due appreciation to the late Dr. Maximilian Herzog, who supervised this work under the sponsorship of Dr. John Dill Robertson, Health Commissioner of the City of Chicago, and also thank Mr. Louis Hlavecek for assistance in the technical work.

25 E. Washington Street.

BIBLIOGRAPHY.

1. Villemin, J. A.: Acad. Sci. Compt. Rend. LXI, 1865, pp. 1012-15; LXIII 1866, pp. 730-732.
2. Tappeiner, F.: Virchow Archiv. 74, 1878, pp. 393-400; ibid. 82, 1880, 353-359.
3. Bertheau, H.: Deutsche Arch. F. Klin. Med., Leipzig, 1880, XXVI, 523-542.
4. Weichelsbaum, A.: Cent. f. d. Med. Wissensch., Berl., 1882, XX, 338-342.
5. Koch, R.: Mitteilungen a. d. K. Gesundheitsamte, Bd. 2.
6. Cornet, J.: Zeitschr. f. Hyg., B5, 1888.
7. Flugge, C.: Zeitschr. f. Hyg., 1889, 30, 107-124.
8. Soparker, M. B.: Ind. Jour. of Med. Res., Calcutta, 1917, IV, 627-650.
9. Petroff, S. A.: Jour. Exp. Med., 1915, 21, p. 38.
10. Corper, H. J.: Jour. Inf. Dis., XXIII, 6.
11. Corper, H. J.: Ibid.
12. Webb: Jour. Am. Med. Assn., 1914, LXIII, p. 1098.
13. Krause, A.: Jour. of Outdoor Life, 1918, July, August.

OPTIC NEURITIS AND THE ETIOLOGICAL RELATION OF DISEASED TONSILS; REPORT OF A CASE.

CARROLL B. WELTON, M. D.,
PEORIA, ILL.

Systemic diseases of many kinds and in many parts of the human organism from infection in the tonsils are of common occurrence. There can be no doubt of this casual relationship of the tonsils to distant diseased conditions from the proof offered in very recent years by a mass of clinical evidence. However, this does not justify the removal of tonsils in every patient any more than the teeth or other structures on which suspicion might be cast, or as a cureall for every disease in which they might be fancied to be the

cause. It is needless to repeat that before the statement can be made that these structures are the offending organs and their removal is necessary, that a careful and painstaking search of every other possible point of infection must have been made and these possibilities excluded. The focal infection theory itself is generally accepted today, but that the tonsil plays such an important role in the production of remote diseased conditions such as infectious and rheumatoid arthritis, myositis, anemia, thyroiditis, endo-, peri- and myocarditis, acute rheumatic fever, cervical adenitis, nephritis and various other general as well as many organic diseases of the eye is not recognized nor allowed by many clinicians, and a great deal is heard of the useless sacrifice or even of positive injury to the patients, which has followed removal of these organs. Where, in a given case after careful investigation of all possible points of infection, such as the teeth, lacrymal sac, nasal sinuses, middle ear and mastoid, gastro-intestinal tract, kidney, liver, gall bladder, lung, bronchi, male or female genital tracts, etc., has been made and no diseased changes are found and where a suspicious condition is present in the tonsils, often relief or a particularly brilliant result will follow tonsillectomy. Billings and Rosenau in their study of focal infection place the tonsil first as the most important agent of chronic infection.

Quite frequently more than one point of infection is found in this class of cases, as for instance, where diseased conditions of both teeth and tonsils exist or an infected tonsil and an intestinal toxemia are present. In such cases as these where beside a diseased tonsil, one or more other local infections are found to exist in the same patient, there must be first instituted measures for entirely eliminating all these other foci as etiological factors in the disease in question, before the advice can be given that the tonsils should be removed.

I have, during the past year, removed the tonsils with most marked relief of his symptoms, in a man 50 years of age suffering from sciatica, who one year previous to this had been told that the cause of his trouble was in the teeth, with the advice to have them all extracted, to which procedure he had submitted, but with not the slightest improvement in his condition. This useless sacrifice, probably of unoffending structures, need not

have occurred had the case been properly and carefully examined and judgment wisely exercised.

On examination neither the size or surface of the tonsils mean anything. There is an absolute lack of standards for a healthy tonsil. They may be small and with few visible crypts and yet on pressure pus, or foul debris may be exuded, or with a clean surface, cultures from within the crypts may still show streptococci. In some cases it will be self-evident that the tonsils are the source of a metastatic infection. In other cases, i. e., those diseases of obscure origin in which the subjective symptoms are few and where the tonsils show little, if any, evidence of an abnormal condition, it is assumed that the help of an internist has been engaged and all other possible sources of infection eliminated. This obviously includes complete laboratory examination and the assistance of a competent neurologist, roentgenologist and dentist. Sometimes it is even advisable, where there is doubt as to the origin of the infection, to leave the final decision to the internist, especially in those cases where the tonsils do not show very definite signs of disease.

Just as infected tonsils are the cause of so many systemic diseases, it is, of course, logical to expect to meet with ocular disease from the same source. Among organic diseases of the eye, in which infection in the tonsils has been found to be the etiological factor, may be mentioned phlyctenular conjunctivitis and keratitis, herpes of lids, conjunctiva and cornea, episcleritis, interstitial keratitis, iritis, iridocyclitis, corneal ulceration, choroiditis, retinitis and retinal detachment, hyalitis, optic and retrobulbar neuritis (Knapp, A.),¹ embolism of the central artery (Brown),² retinal hemorrhage (Lewis),³ paralysis of accommodation and ocular muscles (Veasey),⁴ panophthalmitis, periostitis and abscess of the orbit, and sympathetic ophthalmia (Brown, E. V. L.),⁵ Zentmayer⁶ says, "That the tonsils have not more often been found to be the source of ocular affections is surprising when we consider how frequently they are blamed for general infection." Hansell⁷ remarks, "The answer to this lies in the ignorance and carelessness of oculists." Personally my attention was first directed several years ago to the tonsils as an etiological factor in ocular diseases by remarkable improvement noted following tonsillectomy in some cases of parenchymatous keratitis and phlyctenular disease. Im-

provement was also noted in cases of facial acne following tonsillectomy. Since De Schweinitz⁸ in 1913 called attention to the importance of focal infection in diseases of the eye, the tonsils should have had closer inspection as a matter of routine. Campbell, Worth, B. T., and William Lang⁹ have studied the etiology of inflammatory diseases of the eye and they attribute pyogenic oral infections as the underlying cause in a large percentage of cases. In 10 cases of iritis Lang¹⁰ found 6 of them were due to infection in the tonsils.

In 40 cases of ocular disease reported by Dabney,¹¹ infection in the tonsils was found responsible in 35 per cent., in the teeth 60 per cent., and in the sinuses in 5 per cent. In every case in which the tonsils were at fault, definite diseased areas beneath the plica were found after dissection. Levy and Stinebugler¹² have tabulated 57 cases of eye disease due to focal infections. Through the work of Davis,¹³ Brown and Irons¹⁴ and others, it is now apparent that uveal tract inflammations are manifestations usually of systemic infection. It is also true that involvement of the optic nerve occurs in precisely the same manner, namely, both resulting from an infective agent in the blood.

The term neuritis in connection with the optic nerve is very loosely employed. A better expression of the condition where mechanically produced would be papilledema. According to Adami,¹⁵ while there are examples of true inflammation, frequently this term is used to indicate atrophic changes. He suggests that so-called optic neuritis be referred to as choked disc. "It," he says, "is a disturbance of the optic nerve tending to atrophy, brought about by intracranial pressure and obstruction of the vessels with associated edema. The name, optic neuritis, implies that the changes are inflammatory, but this is probably not true. As the optic nerve is continuous with the brain substance, the cerebrospinal fluid surrounds it in the optic nerve sheath and may press upon it, thus the central vessels which run inside the nerve itself are compressed and edema of the papilla results. Should this edema persist, atrophy of the nerve fibers of the disc may be the result."

The length of time these changes in the optic nerve have been present in these focal infections materially affects the prognosis as to function, so that the earlier the focus of infection is found,

with removal of the toxic element, the better for the patient.

Why is selective localization made of the optic nerve by infections in the tonsils or elsewhere? The explanation of this, as given by Billings and Rosenow¹⁶ is that the bacteria or toxic products from one or more foci are usually disseminated through the blood stream as emboli and carried to the smallest and often terminal vessels where, if virulent and in sufficient number, and if showing specific affinity for these tissues, they excite characteristic reactions and morbid tissue changes. This tendency of organisms to invade special tissues is one of the fundamental facts in etiology and pathology of disease. This action is not accidental, but selective in its working. Rosenow has shown that the locations of selective affinity of these micro-organisms are the joints, tendon sheaths, uveal tracts, heart, etc. It appears that the scant blood supply and low oxygen content constitute a point of lessened resistance in such tissues as the iris, joints, etc., and offer special vulnerability to the infecting bacteria.

The choosing of these mesoblastic tissues, by bacteria or their toxins, other than the uveal tracts of the eye also includes involvement of the sclera, as in anterior scleritis. It is quite probable that the sclera, which as stated before, is mesoblastic in origin and which is the outer protecting tunic of the eyeball, extending backward and forming from its innermost layers the cribriform plate at the disc, that involvement at this point would result in the optic neuritis or papilledema we find present on examination with the ophthalmoscope. This kind of optic neuritis is probably inflammatory in form, due to the local action of bacteria or their toxins and not mechanically as from intracranial pressure, for lumbar puncture in some cases has shown no increased tension of the spinal fluid.

Optic neuritis or papilledema from infection in the tonsils is of infrequent occurrence. It frequently follows rheumatism, tuberculosis, syphilis, gout, influenza, diabetes, smallpox, scarlet fever, grave anemias, menstrual disturbances, nephritis, intracranial diseases such as hypophysis disease, tumor, brain abscess, meningitis and acute infections. In the majority of cases of optic neuritis, central brain disturbance is the cause. It also occurs after injury, such as fracture of the cranial bones and after administration of certain toxic drugs, such as salvarsan. It fol-

lows toxemia from lead and alcohol and recently reports of optic neuritis from "gassing" have been made (Finch).¹⁷ It frequently comes directly from infectious processes adjacent to it, such as disease of the nasal accessory sinuses. Focal infection in any part of the body can cause optic neuritis. Von Hippel¹⁸ and Reber¹⁹ have reported optic neuritis from gonorrhea. Rovinsky²⁰ attributes a case of optic neuritis to infection in the intestinal tract. (Dwyer.)²¹ If the focus of infection is found early and eliminated, cure follows.

eye symptom first appeared 18 months previously, disappeared and returned two months ago. She thinks the eye condition now is much worse and that the vision in that eye is affected.

External examination of the eyes show no abnormality, with vision in each eye normal. Pupils react to light, consensual and to convergence. There is ciliary tenderness in both eyes. T. N. Fields of left eye are normal. Those of right eye show slight form contraction to the temporal side, with marked contraction for all colors. Fundus examination of this eye reveals a swelling of the optic nerve of moderate degree completely covering the disc and extending outwards on all sides half a disc diameter. Macula and arteries

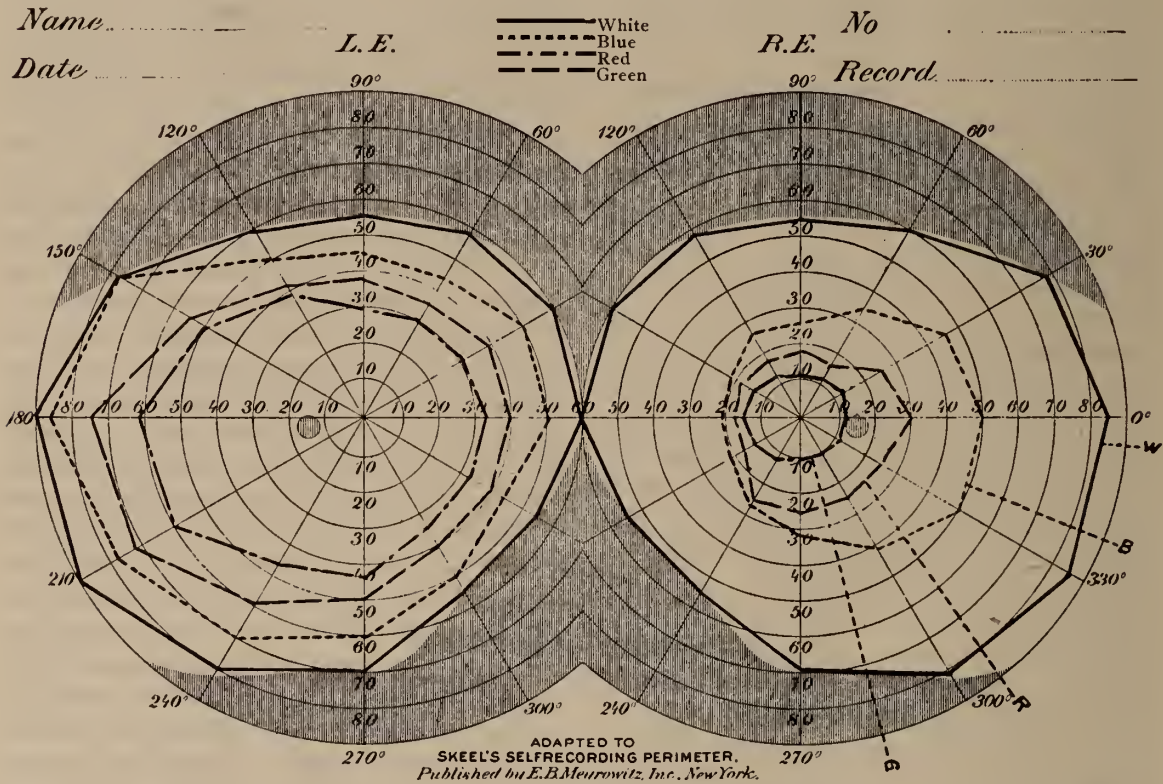


Fig. 1. W, boundry for white; B, boundry for blue; R, boundry for Red; G, boundry for green.

The following case of optic neuritis is of interest: first, because of the obscure etiology; second, because of retention of normal central vision with an inflammation of the nerve head present, but with permanent damage sustained by the nerve, shown in the contraction of the color fields, and third, because of the apparent non-participation of the tonsils and the quick relief obtained with removal of this remote point of infection.

Girl, 17 years of age, who was referred to me on July 5, 1918, by Dr. W. W. Cutter, with symptoms of "chlorosis," together with history of a slight pain and a "scum" or blur before the right eye. This

show no changes. Veins are slightly larger. She has been under treatment with iron for some months at this time without result.

Her family history is negative, she being one of three children. Her mother had one still birth. The patient had a severe attack of illeo-colitis when 10 months of age, has always been a weak nervous child, so much so the last few years, that she has been compelled to stop her school work. Four years ago she had an operation for removal of adenoids. This patient has never had tonsillitis, nor a single symptom, outside of her present condition, that could be referred to them. She has worn glasses 3 years, which she has discarded, that were fitted by an optician.

She now suffers from constipation, has an acid stomach, much back ache, palpitation of the heart, fainting spells and has a great deal of drowsiness, especially in the mornings. She complains of a fullness in the head, which together with weakness and lassitude trouble her so much that she cannot get out of bed mornings. No nausea, vomiting, pain or headache. She weighs at this time 98 lbs. Menstruation is regular and normal.

Her general appearance is that of a girl in delicate health showing marked anemia. Her face shows nasal obstruction, adenoid type, the upper jaw being constricted with deformity of the mouth. The arch is very narrow and there is malocclusion of the teeth. There is a foul odor to the breath. There is an area of congestion over the tonsillar portion of both anterior pillars. The tonsils appear very small, are submerged, and the visible crypts are clean. There are palpable submaxillary and cervical glands. Nose, nasal accessory sinuses and teeth are negative. Temperature normal. First sound of the heart is roughened. Blood pressure is 110-70. Examination of the blood shows hemoglobin 55, whites 8,000, reds 4,246,000. Urine, Wassermann and Von Pirquet are negative. Lead and alcohol intoxication can be ruled out in this case.

Recapitulation then, is that of a girl with a secondary anemia, an organic disease of the right eye and a focal infection in the tonsils. I advised tonsillectomy, which was done on July 25, 1918, under ether anesthesia. The tonsils, which were of medium size, showed debris in the crypts. Immediate relief in her eye and general symptoms began and also within a week there could be noted positive recession in the swelling of the nerve head. In three months the fundus examination showed an almost normal optic disc with the lamina in plain view. Nine months from the time of the tonsillectomy the fundus shows a normal disc and to the nasal side there are two areas of retino-choroidal atrophy, one small, the other spot oval in form about one and one-half disc diameters in size. The fields, however, for form and colors have not improved, remaining the same as at the first examination. Central vision remains normal. She has gained seven pounds in weight.

In this case the rapid recovery after removal of the source of the infection gives proof that the metastatic eye lesion was due to the infection in the pharyngeal tonsils. Relief of both the ophthalmic and general symptoms followed with return to a normal healthy state.

Suker²² reports a case of optic neuritis, which was unilateral and of rather sudden onset. Vision was 20/60 in each eye, not improved by lenses. Field of vision in affected eye for form and colors showed marked constriction. Fundus examination showed edges of left disc blurred and cup filled in. Veins distended, macula blurred.

Blood, Wassermann and spinal puncture negative. No cause could be found but the tonsils. Examination of the tonsils after removal showed hypertrophy with crypts containing much debris. Within 72 hours after, vision rose to normal. Fields for form and color returned to normal.

Sobotky's²³ case was a patient with iritis and biocular optic neuritis following tonsillitis, where a cure resulted after removal of the tonsils. Woman, age 21, with a history of annual attacks of tonsillitis, and following a week after one of these there was pain, blurring and inflammation of both eyes. Examination showed her to be convalescing from an acute follicular tonsillitis, with extreme injection of the right eye, which was painful and sensitive to light. Upper lid slightly swollen. Diagnosis made of iritis of right eye, optic neuritis of both with some engorgement of veins. Ten days later nasal examination showed head cold and diseased tonsils. Teeth and sinuses negative. (Blood examination was not made.) Wassermann negative. Spinal fluid shows pressure of 200. Tonsils removed 2 weeks from time first seen, show cheesy deposits with low grade inflammation. Vision is given 3½ weeks after tonsillectomy R. 20/40 L. 20/30. (Vision before removal of tonsils not given. Fields not charted.) Eleven weeks later swelling of nerve heads subsiding, vision normal and patient doing her work.

Hansell²⁴ reports a case of bilateral optic neuritis from diseased tonsils. Patient had acute double optic neuritis with complete transient blindness. Urine, radiographs, Wassermann and spinal puncture were negative. Tonsils were removed and within 24 hours light perception returned. Slow improvement until at end of one year vision was 4/5. Both discs showed partial atrophy.

Carpenter²⁵ reports a case of a woman with unilateral optic neuritis in which cure resulted from removal of the tonsil on the side affected.

Woman, aged 20, suffering from blindness, with vision reduced to finger counting. Moderate neuro-retinitis with a few scattered hemorrhages and swelling of the disc. All treatment failed. Removal of the tonsil on the side that vision was affected resulted in cure. Fundus changes promptly disappeared. Vision returned to normal and has remained so.

Wyler²⁶ mentions cure of optic neuritis in a

patient with diseased tonsils, which resisted all treatment until tonsillectomy had been performed.

In peri-neuritis of the optic nerve, of which these cases are examples, central vision is preserved and there is concentric contraction of the field for white and colors. Suker says that this form, peri-neuritis, is more common as a result of focal infections. According to Schirmer,²⁷ where damage to the nerve has taken place, the fibers paralyzed first are those with the poorest function—the peripheral fibers. The color sense is the higher function of the fiber and requires more normal conditions than the form sense. Thus a concentric contraction of color fields takes place while white remains nearly normal. The nerve fiber has been found to be very enduring against pressure alone for variable lengths of time. If during this time the damaging agent is removed the nerve fiber will recover. This fact is important in the prognosis as to what vision is going to be retained. Useful vision may return after a week or two of amblyopia.

We may assume that in this type of optic neuritis the action is inflammatory in origin. Intracranial pressure is not the factor in these cases and it is not likely that the toxins of bacteria produce optic neuritis of this type, for examples of ocular disturbances which are toxic in origin are paralysis of eye muscles, endogenous gonorrheal conjunctivitis, uveal tract disease, episcleritis, etc. In ocular disease of metastatic origin from infection in the tonsils, treatment of the tonsils other than excision is useless, as is shown by the work of Nichols and Bryan.²⁸ In their experiments of injecting lamp black in paraffine into all visible openings in dissected tonsils, they were able to show the futility of any treatment directed to the tonsil itself, as it was found impossible to reach all the crypts. Furthermore, after local treatment with strong solutions of silver nitrate where surface cultures for hemolytic streptococci became negative, yet cultures from the crypts were still positive. In patients suffering with acute follicular tonsillitis, arthritis, neuritis, nephritis and general malaise, I have found hemolytic streptococci in a majority of cases by cultures from the crypts. These were patients in whom other points of infection had been eliminated.

In a search of the literature, these five cases

of optic neuritis and that of my own, from diseased tonsils are all that have been reported. That optic neuritis from the tonsils or other foci in the body does occur more frequently than the literature shows, is probable, but unless special attention is directed to these various foci and the source of the infection sought out and found the discovery of the causes of the nerve involvement is not made. Assurance can be given that ocular complications from distant infections in the body have been and are frequent, but the connection between the infected point and the eye disease, until recently, has been overlooked. As will be seen, the neuritis can be unilateral or bilateral and in some cases the disease is of sudden onset and destruction of vision can result very quickly. It is, therefore, necessary to find, if possible, and eliminate any or all distant diseased areas which may be the source of the inflammatory process in the optic nerves. In these cases and in other ocular or general diseases of obscure origin, where a careful study has shown the tonsils as the possible and probable point of infection, tonsillectomy is justifiable as a therapeutic measure.

REFERENCES

1. Knapp, Arnold: *Medical Ophthalmology*, 1918, p. 285.
2. Brown, E. L. V.: *Embolus of Macular Artery*, Ill. Med. Jour., July, 1918, p. 52.
3. Lewis, F. Park: *A Bacterial Toxin as the Cause of Retinal Hemorrhage*. Jour. A. M. A., LXX, 1913.
4. Veasey, C. A.: *Chronic Infection of the Faucial Tonsils as Causative Factor in Paralysis of Accommodation*; two cases. *Ophthalmic Record*, Aug. 16, 1916.
5. Brown, E. L. V.: *Sympathetic Irido-cyclitis and Choroiditis with Preservation of Useful Vision in the Sympathetic Eye*. *Ophthalmic Record*, June, 1917.
6. Zentmayer, Wm.: *Ocular Lesions the Result of Oral and Pharyngeal Disease*. *Amer. Jour. Ophthalm.*, April, 1918.
7. Hansell, H. F.: *Ocular Affections Dependent Upon Disease of the Tonsils; Two Cases*. *Arch. of Ophthalm.*, XLVII, No. 6, 1918.
8. DeSchweinitz: *Etiology of Uveitis*.
9. Lang, W.: *The Influence of Chronic Sepsis Upon Eye Diseases*. *Lancet*, May, 1913.
10. Lang, W.: *Etiology and Treatment of Iritis*. *Lancet*, June 23, 1917.
11. Dabney, V.: *Some Unusual Disease Conditions Apparently Cured by Tonsillectomy; Remarks on Post-Operative Treatment; Preliminary Report*. *Laryngoscope*, 1918.
12. Levy, J. M.; Stinchugler, F. C. and Pease, M. C.: *Investigations as to Frequency of Metastatic Eye Infections from Primary Dental Foci*. *Jour. A. M. A.*, 1917, LVIX, 194.
13. Davis, D. J.: *Jour. Infect. Dis.*, 1912.
14. Brown, E. V. L., and Irons, E. E.: *Etiology of Iritis*. *Trans. Amer. Ophthal. Soc.*, 1918.
15. Adam: *Text-Book Pathology*, p. 507.
16. Billings & Rosenau: *Jour. A. M. A.*, 1915, LXVI.
17. Finch, G.: *A Case of Optic Neuritis Following on Gassing*. *Lancet*, London, 1915, 11-11, 1027.
18. Von Hippel, E.: *Gonorrheal Irido-cyclitis and Optic Neuritis*. *Graef's Arch. of Ophth.*, XCIV, 467.
19. Reber, Wendell: *Some Phases of Modern Ocular Therapeutics*. *Brit. Jour. Ophth.*, London, 1917, p. 294.
20. Rovinsky, A.: *Focal Infection of the Eye From the Intestinal Tract*. *Jour. A. M. A.*, 1919, p. 138.
21. Dwyer, I. G.: *Focal Infection of Eye from Intestinal Tract*. *Jour. A. M. A.*, Dec. 21, 1918, p. 2046.

22. Suker, G. F.: Optic Neuritis (Unilateral) Resulting from a Tonsillar Infection. Report of a Case. *Oph. Rec.*, June, 1917, p. 278.

23. Sobotky, Irving: A Case of Iritis and Optic Neuritis Following Tonsillitis. *Boston Med. & Surg. Jour.*, June 7, 1917.

24. Hansell, H. F.: Two Cases of Monocular Optic Neuritis. *Med. Rec. N. Y.*, 1915. LXXXVII, 605.

25. Carpenter: *Amer. Jour. Ophth.*, Nov., 1918, p. 787.

26. Wyler, J. S.: Difficulties in the Diagnosis of Monocular Neuritis. *Amer. Jour. Surg.*, N. Y., 1917, XXXI, 87.

27. Schirmer, O.: Optic Nerve Affections and the Ductless Glands. *Jour. Nerv. & Ment. Dis.*, N. Y., 1916, XLIV, 358.

28. Nichols & Bryan: The Tonsils as Foci of Infection in Streptococcus Hemolyticus Carriers. *Jour. A. M. A.*, LXXI, 1813.

DISCUSSION

(Abstract.)

Dr. Charles H. Long believes that specialists all understand that the tonsil is only one of many and may not be the chief focal infection point and he would emphasize more than anything else to not take the tonsil out until we find out and get rid of the other sources first.

Dr. J. C. Beck (Chicago) believes that the tonsil, the appendix and the gall-bladder, structures that have open tracts for getting rid of the infection, are in small part responsible for the troubles that we speak of as distant infections. He noted the danger of the closed embolic abscess, a small particle of pus causing such terrific destruction as a vegetative endocarditis, and warned that we ought to look for the places that are subject to infection and closed off. There are nine different points that have been brought out, particularly by Rosenow and his work on the closed off places, the teeth holding first place.

He attributes many of the good results obtained from the removal of tonsils not to those tonsils from which pus can be squeezed, but rather to opening up peritonsillar blind abscesses, with so-called innocuous pus which is a streptococcus viridans infection.

Dr. Tydings (Chicago) reported a case of cyclitis cured by a specialist, Dr. Pennington, of Chicago, due to focal infection, coming from diseased Houston's valves.

In a case of choroiditis from Dr. Way, of Chicago, a surgeon, after various tests it turned out that he also had a chronic appendicitis. "Doctor, this man is suffering from appendicitis in chronic form, and I am waiting for his eye to get better to operate." I said "Operate," and in two weeks he was in my office with his eye perfectly well.

Dr. Welton: I would like to say a word about the point of pillar congestion which has been mentioned in this discussion. It has been my experience that pillar congestion didn't amount to very much. I find that in nearly all cases. The main thing I have depended upon is that if the pus can be squeezed out of a tonsil, especially at the upper point of the tonsil, I can say that that tonsil is infected, but as far as the congestion is concerned, I have found that in some cases where neither pus nor debris of any kind could be found or exuded there still would be found congestion of the anterior pillar and I do not place much reliance on this symptom.

NEW PROBLEMS IN EMPYEMA*

EMIL G. BECK, M.D., F.A.C.S.,
Surgeon to The North Chicago Hospital.

CHICAGO

Now that the epidemic of influenza has subsided, there remains an accumulation of chronic suppurations. We have learned and are still learning new things about empyema and its treatment as a result of this last epidemic. I believe, therefore, it is timely to bring this subject before the Association again this year for discussion.

The following questions are most pertinent:

1. We should try to explain the great mortality in operations of empyema during the recent epidemics.

2. We should define the term "Empyema." When is a fluid in the chest cavity called and pronounced an empyema?

3. Multiple encapsulation of pleuritic exudates, what are the causes?

4. What is the proper procedure in bi-lateral empyema?

5. We should define the indications for rib resection, aspiration, or the catheter drainage.

6. Let us study the advantages over pre-epidemic methods. Flush or not to flush is the question.

7. Let us discuss the treatment of the cases which persisted in drainage of pus after operation and flushing.

Since there are only a few minutes allotted to the presentation of each paper, I shall not be too liberal with another man's time, and instead of reading a paper I will throw on the screen a few slides which will suggest the points just mentioned for discussion. I shall not try to answer all of these questions myself, but initiate the discussion by raising the questions.

In regard to my comments on Question 1. The high mortality in operations was mainly due to the inability of the surgeons to choose the right time for the operation. As a rule I believe they operated too early, probably in the stage of acute pneumonia with effusion. The effusion is thrown out by nature to immobilize the lung during the acute stage, and in the removal of the fluid the immobilized lung again follows the respiratory movement and thus the condition

*Read before the yearly session of the Association for Thoracic Surgery at Atlantic City, June 8, 1919.

is aggravated. We might say the surgeons operate on acute pneumonia instead of an empyema and nobody would think it wise to operate in an acute stage of pneumonitis. The proof of my inference might be gained by reading the report of Major Max Ballin of Detroit of his surgical service at Camp Grant, in the *Journal A. M. A.*, page 335, vol. 72, No. 5. I quote his words:

"The results of such early operations in streptococcal empyema were so lamentable that the Surgeon General sent an empyema commission to Camp Lee to study the question. The report of this commission brought out several points:

"First, not to operate as long as the pneumococcal process was in existence.

"Second, to aspirate if the quantity of serous exu-

forations from the lung lead to the infection of the pleural sac, just as general peritonitis is due to perforation of some intra-abdominal organ. He also regards the operative treatment in this stage as a mistake and now that time has given us a chance for reflection, it may be put down as law: *Never operate in the formative stage of empyema.*

Question 2: The word "empyema" is derived from the Greek, em-inside, peon-pus, meaning pus inside. We should therefore only regard these cases as empyema in which the exudate is true pus.



Fig. 1. Shows multiple abscesses in Right and Left Lung

date in the chest was such as to interfere mechanically with respiration.

"Third, to operate only after the pneumococcal process has subsided, when real pus has formed.

"These rules were observed on twenty-three consecutive cases at Camp Lee and there was only one death, whereas previously the mortality had been as high as 50 per cent."

Col. A. Moschkovitz divides empyema into three stages: First, the formative; second, the acute; third, the chronic. He has made one interesting observation, namely, that small per-



Fig. 2. Bi-lateral Empyema. Lung abscess. A—Resected Rib, drainage. B—Counter-drainage opening.

What constitutes pus? We will have to arrive at some definite rule as to when the fluid may be called pus, semi-purulent, or serous fluid. The term pus has been used in a somewhat indefinite sense, in such descriptions as "a purulent substance," "a sero-purulent discharge" or "a pusy discharge." The fact is that a serous exudate, such as we find in these acute cases of empyema, will gradually become purulent and finally become a creamy thick substance, which is designated as true pus.

At what particular stage of purulization should we regard this fluid as pus? In my paper on the "Empyema Problem," I have put down an arbitrary rule for myself and it might be here considered whether such a rule would stand. I herewith repeat the rule: If we withdraw about 10 cubic centimeters of this fluid every 24 hours and pour it into a test-tube we will note that the sediment of these samples will vary. The amount of the grayish purulent material settling at the bottom of the tube will be greater each day, so that the fluid drawn on the tenth day might contain as much as 30 to 40 per cent of sediment and 60 to 70 per cent of clear serous fluid. If the fluid withdrawn contains more than 20 per cent of sediment after standing for 24 hours, it may be considered true pus.

Question 3: I should regard the multiple encapsulation of pleuritic exudates due to the character of the infection, namely, the streptococcus, which causes adhesions of the lung to the costal pleura. The more acute the condition the more likely that multiple encapsulation will occur. The reason that formerly we did not meet this condition so often is the fact that we rarely had to deal with very acute pleuritis as we did in these recent epidemics. In some instances the surgeons have found blebs on the surface of the lung containing pus. It is likely that these peripulmonal little abscesses did not break and empty their contents into the pleural cavity but that they became adherent to the costal pleura and gradually enlarged and formed real abscesses. Another reason for multiple encapsulation is advanced by Major Moschkovitz, namely, that when patients are not operated upon, the pleural surfaces will adhere around the accumulations of pus.

Question 4: Bi-lateral empyema has occurred more frequently for two reasons: In the first place the pneumonia was very frequently bi-lateral, which was not quite as often the case in ordinary times. Secondly, among a large number of cases it is likely that more than one case will fall into the hands of one man, which in former times was very unusual. I cite one very interesting and unusual case:

BY-LATERAL EMPYEMA IN PREGNANT WOMAN, CHILD-BIRTH NORMAL DURING ACUTE STAGE (RECOVERY).

Mrs. S., aged 35 years, developed a severe case of influenza in September, 1918, followed by bi-lateral pneumonia and consequent pleural pus effusion on both sides. The house physician punctured the right

chest repeatedly, withdrawing small quantities of pus. She was then in the eighth month of pregnancy and gave birth to a normal child while both pleurae were filled with pus.

On December 21, under local anesthesia a catheter was introduced in the interspace of the 8th rib on the right side in the axillary line. This relieved her somewhat, as she was moribund at the time this was performed. She rallied and on January 11, one inch of the right 8th rib posteriorly was resected and a large tube introduced. Stereo-radiograms at this time showed that there were multiple abscesses in the left as well as the right side. Fig. I. Temperature kept up from 99 to 101, daily respirations 40, pulse 130 to 150. On January 14 another operation was performed on the left side, the counter-drainage operation, which is here illustrated in Fig. II, described recently in *Surgery, Gynecology, & Obstetrics*, April, 1919. After this operation the lung began to re-



Fig. 3. Skin sliding operation for very chronic empyema. Left lung exposed for regeneration of skin into cavity.

expand and both cavities were injected with bismuth paste. The fever gradually disappeared and patient gained in strength and weight. At the present time both sides are closed and she is gradually regaining her health. Whether there will be any recurrence we cannot say at present.

Question 5. I do not think it is necessary to resect a rib in every case. I believe that the treatment with introduction of a catheter through a cannula and gradual withdrawal of the pus by gentle suction should be given a trial on a large scale before we decide that a resection of a rib must be done in every case.

Question 6. The question as to whether the flushing will have a permanent place in the treatment of empyema is so large and I am sure it will be discussed on the basis of some other papers on the program. My own experience has been very limited, but its greatest use in the cases in which I have employed it was in the solving of fibrinous adhesions and in decreasing the toxicity of the pus when present, so that the patients were put in better condition for recuperation.

Question 7. The discussion of the after-treatment which should follow in the cases which resisted the flushing and operative treatment I brought before this Association last year and I wish to report my progress in this line by citing a very few cases.

I demonstrated to this Association a number of cases at the last meeting in Chicago, in which either the bismuth treatment or the skin sliding operation had been performed to take care of the resistant cases. During the past year I have had a greater opportunity than ever to carry out this treatment on a large series of cases. With proper technique about 80 per cent of these cases, the residue left over after all the usual methods of drainage and flushing had been tried, were closed by the injection of the bismuth paste. In the remainder, the skin sliding operation has been employed and carried out with some improvement in the technique.

The following are the improvements made in this operation: *1st*: Instead of taking two or three ribs, we have taken as many as six or seven, so that the cavity may be most widely exposed. This wide exposure promotes the growth of skin from the edges of the wound. *2nd*: It is not necessary that the skin flaps should cover the entire area of the pleura exposed. I have made them shorter than previously. I have also found that it is better to decide on the size of the flaps after the cavity is fully exposed. *Fig. III. 3rd*: In many instances it is necessary to cut away about one-half of the pectoralis major muscle. This will not interfere at all with the function of the arm and will very much aid in the quick regeneration of the skin flaps into the cavity.

Since my last report this skin sliding operation has been employed by many of my confreres and their reports indicate that this ope-

ration is simpler and more likely to be effective than similar types performed in previous times.

*SKIN GRAFTING

JOHN F. PEMBER, M. D.,

AND

THOMAS W. NUZUM, M. D.

JANESVILLE, WIS.

It has fallen to our lot in past years to have under our care patients who have suffered from burns so extensive that large areas have to be covered with grafts. The care and management of these cases provided the thought for this paper.

By grafting the period of healing is reduced from months or years to weeks or days, and in addition, grafting saves many an extremity without which amputation would be necessary as a result of cicatricial contraction. It also relieves much suffering, and no doubt occasionally prevents death from amyloid degeneration of the kidneys. The three important methods of grafting are those suggested by Reverdiu, Wolf and Thiersch, respectively.

Reverdiu's technique consists in lifting a small portion of skin with a needle, removing it with curved scissors and placing this island, with many like it, on the denuded area. These grafts at first apparently disappear, owing to disintegration of the epidermis, but later appear as bluish-white spots from which the epithelial growth proceeds in all directions.

Wolf's method is accomplished by excising a piece of skin one-sixth larger than the area to be filled, removing all the fat from its under surface and placing it in the defect, from which all the scar tissue has been removed, and in which the graft is held by pressure of the bandage. *Hair* thus transplanted usually falls out and regenerates irregularly. In this connection it is interesting to note that when skin is transplanted from a negro to a white, the pigment gradually disappears and vice versa, skin from a white man grafted on a negro gradually becomes pigmented. Healing of a Wolf-graft occurs within three to five weeks.¹

If the graft has a larger area than thirty-six centimeters, necrosis is almost certain to occur, and therefore, despite certain advantages, the use of this method is restricted and is being re-

¹Read before the Tri-State District Medical Society.

²Greenfield, D. G.: Brit. Med. Jour., 1917, Apr. 14.

placed by pedunculated flaps which insure results.

The third method, the Thiersch-graft, is the one we have most frequently used. It has four points of marked value, viz: greater resistance, less shrinkage and better cosmetic effect and lessened period of healing. Such a graft will grow on any fresh surface, except upon a tendon denuded of its sheath, or a bone denuded of its periosteum. It goes without saying that the surface to be grafted must not only be free from necrotic tissue, but must be covered by a healthy, firm granulation tissue, and one from which a stained smear under the microscope shows a bacterial count of six or less organisms to the field. There are many ways of getting the area to be grafted into this condition. We most frequently employ a boric-alcohol dressing for two or three days, and on the evening before applying the grafts the area is painted with a solution of 3.5 per cent. iodine in alcohol. Frequent saturation of the dressings on the raw area with Dakin's solution (neutral solution of chlorinated soda) or the application of a four per cent. solution of dichloramine to the surface to be grafted, soon give a practically sterile field. The appearance of the field should not be used as the only guide as to when grafting may be done. A count of the number of bacteria in a field of a smear from it would often prevent too early grafting and a consequent loss of grafted skin from infection.

Long experience taught us that grafts from the patient took best, and that skins from some relative or friend "took" better than others. Now, by use of the Moss method of blood grouping, we are able to determine beforehand the individual whose skin will "take" when grafted to the patient's wound, and those whose grafts would be lost. Consequently we test the agglutination of the patient's cells and serum and use as a donor only an individual who falls into the same blood group as the patient. As a matter of safety we use a donor whose Wassermann is negative.

The patient himself is the best donor, and in most instances we have been able to obtain from him enough grafts to cover his wounds. The epithelium readily recovers the areas denuded by graft-cutting razor, and within six weeks the identical area is again capable of yielding excellent grafts. It is possible to use the same area repeatedly if necessary. Under proper condi-

tions we have found that ninety per cent. of a homo-graft will take, whereas an is-graft, viz., such as grafts taken from a donor, have only averaged sixty to eighty per cent. of "takes" even though the donor and patient fall in the same Moss group.

The preparation of the surface from which the grafts are to be taken depends much on the preference of the operator. The method we have used is extremely simple, consisting in cleansing with benzine following by rinsing with a four per cent. solution boric acid, and the application of a sterile dressing until such time as the grafts are cut.

The technique of cutting Thiersch-grafts is so well known that comment is scarcely necessary. Sharp razors are imperative. The surface from which the graft is to be taken must be held taut. As in other surgical procedure, practice and skill are necessary in obtaining thin grafts of the desired width and length. One assistant should devote his entire attention to teasing over the edges of the graft and adjusting them after they have been placed upon the wound. The grafted surface should be absolutely bloodless and dry and all air bubbles pressed out from beneath the grafts. If the grafts are large, an occasional "buttonhole" here and there will serve as an outlet for the serum which may form beneath them and will keep the graft from being "floated up" from the wound and lost.

The dressing of the grafted area and its after care are of much importance. At the present time the dry or open dressing is very popular. Wirebasket is fitted over the wound and strapped on with adhesive to prevent removal, the wound being left exposed to the air.

We have, however, obtained somewhat better results by the use of strips of gutta pereha tissue moistened with normal salt solution and placed in a criss-cross manner over the wound. Dry gauze is placed over this and the dressing left undisturbed for several days. This dressing is reapplied at intervals until healing has occurred. Instead of the gutta-percha tissue, cloth net saturated with paraffin may be applied and if this sticks at removal the application of petrolatum for a few hours will permit removal without displacement of grafts.

Among the instances in which the Thiersch-graft has served us well are two which we would

like to mention. In the first there was a complete avulsion of the scalp and of the forehead down to the eyebrows and including the root of the nose. Thiersch-grafts resulted in a short period of convalescence and the cosmetic effect is good. The woman wears a wig and would scarcely attract your attention. The second patient, in addition to many other severe burns, lost all the skin of the right arm and forearm. Thiersch-grafts again resulted in comparatively short convalescence. There are no contractures and the movements of the entire arm and hand are unimpaired. The cosmetic effect is also good.

DISCUSSION.

(Abstract.)

DR. EMIL G. BECK, of Chicago: We have employed a method for the last four years which in a great measure obviated the necessity of skin grafting. Large surfaces of granulating surfaces may be covered with skin by promoting the growth of the skin from the edges. The skin does not grow over the granulating surface because the granulations grow higher than the skin. In other words they overlap the skin edges and the skin cannot grow upwards. If you can keep a level surface between the edges of the skin and the granulating surface, the skin will grow from the cut border and cover a surface as large as ten inches square without any skin grafts.

The edges of the skin are cleaned of granulations, and then a strip of adhesive plaster placed so as to cover the granulating surface as well as the skin. In 24 hours the strips are removed and you will notice a bluish border around the skin wound. The next 24 hours the wound is just covered by gauze and again in 24 hours the strips of adhesive plaster are applied. In this way you may watch the gradual progress of the skin grow over the entire surface.

I have not employed skin grafting very much except on very large surfaces where I wanted to hasten it. Here I want to mention a few points in technique. I agree with the last speaker that you should not leave spaces between the different grafts. In fact, I usually place one graft right in the center of the wound. We have our surface perfectly dry from blood, and then the skin graft is placed and dressed with gauze and after it adheres, especially around the edges, it should not overlap. Then vaseline is poured over it and dressing put on.

This method can be applied to burns, and to fresh denuded surfaces after operation; for instance, after amputation of the breast, when you have not enough skin to cover the denuded surface.

DR. PUMBER: How can you get away from skin grafting when you have to cover the whole scalp? I have seen the method applied by Dr. Beck, but when you have the whole chest, leg or part of leg, it seems to me that grafting is the best method.

Then again, I never had any luck with epidermal

grafts. It certainly does shorten up the period of convalescence a great deal, and I think that the method of carbolic acid might be all right for small wounds. I think Dr. Beck's method would be all right for medium wounds, but I don't see how you can cure extensive wounds by any method other than by grafting.

DR. BECK: We happen to have a great many burns from the Electric Company in Chicago and one of our internes has charge of them. We have cases of extensive burns of the chest and arms. Some of them cover nearly all the chest and the back. We have not done any skin grafting on these cases. It is surprising that entire surfaces have been covered with skin after treatment with paraffin. I have seen in Cincinnati a case demonstrated in which the entire scalp had been treated by paraffin spray and the entire skin has regenerated on the head. I don't think that the objection raised is valid. I think it can be used on large surfaces, but I do not say that skin grafting should be entirely discarded. The doctor is perfectly correct that it shortens the duration. -

A STUDY OF 100 CASES OF SUSPECTED CHRONIC NASAL ACCESSORY SINUS DISEASE WITH A REPORT OF THE X-RAY FINDINGS.

HOWARD CHARLES BALLENGER, M. D.*

CHICAGO, ILL.

In going over the literature of the x-ray of the nasal accessory sinuses I have been impressed with the many diverse opinions and reports expressed concerning the accuracy and value of the procedure. It is with the hope of contributing somewhat to the clarification of the results to be expected that I report this series of cases.

Röntgenography of the nasal accessory sinuses is essentially a shadow transposition of the differential densities of the bones of the skull as modified by certain diseases or conditions, i. e.:

1. Age. In infancy there are numerous modifying conditions such as size, shape, development, etc., of the sinuses and bones of the skull.
2. Sex. Men are apt to have thicker or heavier bones than women.
3. Certain diseases, such as those characterized by loss of lime salts.
4. Thickness of bone of face and skull. This may be a localized thickening, an unilateral or bilateral thickening.
5. Asymmetry of the sinuses or bones of the skull.

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6. Altered mucous membrane. This may take the form of an excessive thickening due either to infection or as a post-operative result or the alteration of the mucous membrane may be an extreme thinning or atrophy.

7. Inflammation or suppuration within the sinuses.

8. Inflammation or suppuration adjacent to the sinuses.

9. Tumor formation involving the region of the sinuses or the sinuses themselves.

10. Angle of exposure. Various dense structures such as the petrous portion of the temporal, the vertebræ or the base of the skull¹ may be projected in line with the sinuses, obscuring and interfering with the proper reading of the plates.

In view of the above modifying conditions it is illogical to assume that a diagnosis can be made from the plates alone. A secondary place perhaps should be given to the x-ray and the main reliance should be placed on clinical means. Caldwell² was the first to show that the contents of a sinus, whether pus, normal salt solution or water, offer about the same degree of obstruction to the x-ray. Beebe³ arrived at the same conclusion after injecting the sinuses with liquids of varying densities from water to thick pus. Differentiating between a pus filled sinus and a neoplasm is not always easy, although the neoplasm usually involves other structures, as well, which somewhat simplifies the diagnosis.

The angle or plane of exposure is important and should be governed by the sinus or sinuses suspected. The custom largely prevalent in the past and at present is to have one sagittal (posterior anterior) view and one lateral view. When the expense is to be considered, this, perhaps, will give as much general information as any other two views, but the objection to these are that in the lateral view the ethmoids and sphenoids are superimposed upon the opposite sides and their outlines are confused or blurred. In the posterior anterior view the ethmoids and sphenoids are superimposed and an intelligible reading frequently rendered impossible.

An excellent procedure, when general information concerning all the sinuses is desired, is to have three views, one posterior anterior (Caldwell) and two obliques (Rhese). In the posterior anterior view the tip of the nose and the forehead touch the plate. The rays are

passed from near the occiput at right angles to the plate. The right and left oblique views are taken as described by Rhese⁴. In the oblique position the object is to project the sphenoid and the posterior ethmoids through the orbit. To accomplish this the tip of the nose, the brim of the orbit and the malar bone touch the plate and the rays enter the parietal region about two inches posterior and one and one-half inches superior to the external auditory meatus. This should project the optic foramen near the center of the orbit. To the median side and below is the sphenoid sinus. Above the rim of the orbit is the frontal sinus. The ethmoids occupy the space below the frontal and extending posteriorly to the sphenoid.

For the frontal sinus alone the Caldwell position is ideal. If operative interference is anticipated this position should be supplemented with a lateral view so that information concerning the depth of the sinus can be obtained.

For the ethmoids, as stated above, I prefer the oblique position of Rhese. Both sides should be taken for comparison.

If a picture of the antrums alone is wanted an excellent view is obtained from the extended chin position first described by Waters⁵ and Waldron⁶, in which the petrous portion of the mastoid falls below the floor of the antrum. This position is obtained by having the chin of the patient touch the plate and the tip of the nose from one to one and one-half c.m. from the plate. In a concave face an increase of one-half c.m. in the distance of the nose from the plate is required. This position gives a slight distortion of the frontal sinuses, due to the distance from the plate. The posterior ethmoid cells are shown below the anterior group. This can be demonstrated by means of bismuth paste or metal clips.

A satisfactory view of the sphenoid is sometimes hard to get. Pfeiffer⁷ has described a method whereby the two sphenoids are shown side by side. The patient extends the chin forward over the plate and the central rays pass vertically through the head in the median line at a point 2 c.m. in front of external auditory canal. Bowen⁸ places the plate on top of the extended head and passes the rays from below up. A combination of lateral, oblique and vertical views will usually give enough information to greatly assist in the diagnosis.

Beebe³ calls attention to the fact that the blurring or hazing of the sinus outline is of more diagnostic import than the shadow cast. He bases his objection to the roentgenogram taken stereoscopically on this fact. I believe this is especially true in acute sinus infection before any distraction or hypertrophic mucous membrane changes have taken place, but where changes in the mucous membrane have occurred or where we are dealing with tumor formations the shadows cast are of diagnostic import.

In the 100 cases reported, the x-ray shows 28 were negative. Of these 28 cases all but one (case No. 48) showed no clinical evidence of sinus disease. This case where the x-ray showed negative and in which a possible clinical diagnosis of sinus disease might be made was in a young man age 20, who one year ago complained of some stuffiness of the nose without any nasal discharge except an occasional acute rhinitis. At this time he visited a free dispensary where the left middle turbinate was removed. Since the operation he has had an excessive amount of thick heavy muco-purulent discharge with large crusts from the left side. At the time I examined him (one year later) I found a condition very closely resembling a chronic atrophic rhinitis on the left side. Considerable scar tissue in the region of the middle meatus was present and the nasal mucous membrane covered with a thick muco-purulent secretion with some crusts. The possibility of the purulent secretion originating from the sinuses being present, x-ray plates were taken which failed to show any sinus disease. A diagnosis of atrophic rhinitis of traumatic origin was made.

Of the 72 cases in which the x-ray revealed a cloudy sinus or sinuses, 36 were confirmed by surgical means, 21 were confirmed by clinical means other than surgery, 4 were post-operative—that is, plates taken from two weeks to six months after the sinus operation without unusual post-operative symptoms, leaving 9 cases in which the sinuses were cloudy, but which showed no clinical evidence of sinus disease. Of these 9 cases the plates showed part or all of the ethmoids cloudy in 4 cases (Nos. 83, 84, 91 and 99). At the time of examination no evidence of ethmoid disease could be found, although all gave a history of having had former attacks of acute

rhinitis with a watery or a muco-purulent discharge.

In one of the 9 cases, a patient with hay fever (No. 16) the plates showed the left antrum and ethmoid cloudy. At the time of examination (July 14) a slight congestion of the nasal mucosa with some watery secretion was observed, but no more evidence of a sinus involvement could be found. The cloudy antrum and ethmoid could be explained through some former involvement which left a thickened mucous membrane. In another case (No. 82) the right sphenoid was cloudy with no clinical evidence of disease. The sinus was not opened and hence confirmation was not made. He had had a previous sinus involvement in which the right antrum had been opened.

Of the three remaining cases the plates revealed dark antrums. One (case No. 25) had had a cyst removed from the floor of the antrum about ten years ago. The antrum was reopened and no pathology other than a thickened mucous membrane was found. The second antral case (No. 30) had had a former antrum operation about 1 year ago. The plate showed a cloudy antrum, but in the absence of any clinical findings and in view of a former antrum operation, the antrum was not opened.

The third antral case and the last of the nine cases which were not confirmed by clinical means was case No. 8, who had had a tooth filled two years ago since which time he has had a root abscess and later a continuous discharge from the tooth cavity, pain, tenderness and swelling over the region of the antrum, no nasal discharge and no evidence of pus within the nose. Investigation revealed a clear antrum, but a subperiosteal abscess over the region of the canine fossa, which evidently was the factor producing the cloudy appearance of the antrum.

It is interesting to note from a study of the cases (see table 1) that where the chief symptoms were a constant nasal discharge without pain or headache there were twenty-three cases (23%), three of these (12½%) were negative and twenty (87.5%) showed cloudy sinuses. Of the twenty cloudy cases three (cases Nos. 25, 82, 84) were not confirmed. In those patients where the chief symptoms were a constant nasal discharge with pain or headache there were seventeen cases (17%). All of these or 100%, showed cloudy sinuses. One case (No. 91) was not confirmed.

CASE NO.	CHIEF SYMPTOMS	DURATION	X-RAY FINDINGS	CLINICAL FINDINGS
Mrs. H. 1	Frequent colds—nasal discharge—complete nasal stenosis right side.	Colds and discharge for years—stenosis two months.	Cloudy right antrum, outline indistinct.	Fibrous polyp filling inferior meatus apparently arising from right antrum. Polyp removed.
P. W. H. 2	Profuse nasal discharge worse left side. Bad odor. Began one year ago following ulcerated tooth.	One year.	Cloudy left frontal, ethmoid and antrum. Outline indistinct.	Pus emerges from middle meatus. Odor. Operation refused.
Mrs. C. 3	Muco-purulent discharge left side—complete nasal stenosis left side.	Two years. Complete stenosis last two months.	Cloudy left antrum.	Sarcoma left antrum and nasopharynx. Mucous membrane of antrum ulcerated and thickened.
D. C. H. D. 4	Occasional muco-purulent discharge.	Years.	Negative.	No evidence of sinus disease. Hypertrophic posterior ends of inferior turbinates.
D. A. 5	Nasal discharge and odor at times, headaches, polypi have been removed at times.	Years.	All sinuses cloudy. Outlines indistinct.	Exenterated ethmoids. Polypoid degeneration. Mosher operation on frontal. Sphenoid opened. Antrum not opened.
E. S. C. 6	Nasal discharge, pain over eye and side of nose for two months.	Discharge for years. For two months.	Cloudy left antrum indistinct.	Operated on antrum. Findings not recorded.
H. C. B. 7	Post nasal discharge—frequent colds, acute rhinitis at present.	Years. Present three weeks.	Right ethmoid cloudy.	Muco-purulent discharge from the region of both middle turbinates. Slight odor. Cleared up under treatment. Subsequent plates clear.
E. H. B. 8	Pain in right superior maxillary region since filling of a tooth two years ago. Has had gumbolls from tooth.	Two years.	Right antrum cloudy and outline indistinct. Abscess at root of tooth.	Antrum opened. Sub periosteal abscess in canine fossa.
U. H. 9	Nasal discharge left side—worse last two weeks. Years.	Years.	All sinuses cloudy on left side. Outline indistinct.	Antrum opened left side. Pus found. Thickened mucous membrane.
D. D. 10	Purulent discharge left side. Pain and headache over left frontal. Began with nasal cold.	One month.	Cloudy left frontal and left anterior ethmoid.	Tenderness over left frontal. Pus emerging from beneath anterior portion of left middle turbinate. Transillumination of antrums clear.
Mr. D. 11	Complete nasal stenosis on right side. Odor and discharge.	Six months.	Nasal cavity and right anterior ethmoids cloudy.	Carcinoma of nose—operation. Involvement of nasal cavity, septum and ethmoids on right side. Skin around aperture of nose involved.
Mrs. H. 12	Asthmatic symptoms—frontal headache.	Nine months.	Cloudy right ethmoids.	Ethmoids exenterated on right side, hyperplastic type.
Miss C. 13	Asthmatic symptoms—muco-purulent discharge alternating stenosis—has had both middle turbinates removed.	Three years.	Cloudy anterior ethmoids both sides.	Both groups of anterior ethmoid cells exenterated, small polypoid degeneration found on left side. Right side hyperplastic.
Mrs. B. 14	Nasal hemorrhage on left side, frequent headache above left eye.	Six months.	Cloudy left bulla ethmoiditis.	Bulla opened and surrounding cells curetted. Mucous membrane of cells thickened.
Miss P. J. D. 15	Frequent head colds and sore throat.	Years.	Negative—left frontal rudimentary.	No evidence of sinus disease. Tonsils enlarged with infected crypts.
Miss F. D. 16	Sneezing and watery discharge (hayfever).	Fourth season.	Left antrum and ethmoids cloudy.	Findings not confirmed. No operation. Pus not found. Mucous and serum present in nasal cavities.
C. M. B. 17	Muco-purulent discharge both sides—Dull frontal headaches, frequently sneezing.	Six years.	Left anterior ethmoids, slight cloudiness of right anterior ethmoids.	Left ant ethmoids exenterated. Muco-purulent secretion.
P. B. 18	Constant head colds following partial removal of tonsils and adenoids three years ago.	Three years.	Left posterior ethmoids cloudy.	Muco-Purulent secretion found—no operation.
D. E. 19	Mucous discharge and slight crusting—epipharyngeal soreness—partial nasal stenosis.	Years.	Negative.	No evidence of sinus disease—deviated septum. Some adenoid tissue present.
Dr. S. J. B. 20	Headache since removal of tip of left middle turbinate.	Months.	Negative.	No evidence of sinus disease.

CASE NO.	CHIEF SYMPTOMS	DURATION	X-RAY FINDINGS	CLINICAL FINDINGS
21 F. K. B.	Nasal discharge on right side.	Months.	Right ethmoid cloudy.	Opened ethmoid cells right side—pus found.
22 E. B.	Nasal discharge—frequent polypl. Asthmatic symptoms.	Four years.	All sinuses cloudy and outline indistinct.	Polypl present. Pus in both middle meati. Pus found in antrums and ethmoids. Thickened mucous membrane. Frontals and sphenoids not opened.
23 B. L. B.	Asthmatic symptoms—partial nasal stenosis. Has had left middle turbinate removed. Has had some nasal discharge at times.	Years.	Negative.	No evidence of sinus disease. Enlarged middle turbinates and tonsils removed. Asthma greatly improved.
24 S. A. C.	Muco-purulent nasal discharge.	Months.	Right antrum very cloudy. Outline indistinct. Left antrum slightly cloudy.	Right antrum opened. Pus and thickened mucous membrane.
25 Mrs. D.	Nasal discharge. Had cyst of right antrum removed ten years ago.	Worse last months.	Right antrum cloudy and outline indistinct.	Right antrum opened. Mucous found. Membrane thickened. No pus.
26 Miss P.	Post nasal discharge since removal of right middle turbinate two years ago.	Two years.	Negative.	No pus observed. Deflected septum, chronic lacunar tonsillitis.
27 D. C.	Purulent discharge left side of nose. Crusting in epipharynx.	Years.	Right anterior ethmoids cloudy.	Currerted anterior ethmoid cells and opened agar nasi cell. No record of condition of cells.
28 D. D.	Frontal and occipital headache. Had sub-mucous resection four months ago which gave some relief.	Years.	Negative.	No evidence of sinuses disease. Middle turbinates in firm contact with septum.
29 Mrs. McE.	Frontal headaches—occasional purulent discharge.	Three years.	Negative.	No evidence of sinus disease, both middle turbinates in contact with septum.
30 Mrs. H. D.	Dull headache supra-orbital and occipital. Has had operation on left antrum one year ago. No discharge at present.	Three months.	Left antrum cloudy.	No evidence of pus in nose. Antrum not opened.
31 Mrs. D. C. F.	Post nasal discharge of clear mucous—frequent head colds and sore throat.	Years—worse last months.	Left ethmoid and antrum slightly cloudy—outline indistinct.	Muco-purulent discharge in post nasal space. Hypertrophic tonsils. Deviated septum.
32 Miss B. G.	Excessive muco-purulent discharge—crusts on nose. Has had left antrum opened and both ethmoids currerted.	Years.	Left posterior ethmoids cloudy. Left antrum not as clear as right.	Left ethmoids currerted—muco-purulent secretion. Membrane atrophic. Antrum found radically opened. Whitish secretion lining antrum.
33 Mrs. J. A. G.	Occasional frontal headache and constant feeling of stiffness in eyeballs.	Months.	Negative.	No evidence of sinus disease found.
34 G. A. H.	Headache in right frontal and right orbital region. Purulent nasal discharge right side. Partial deafness right ear.	Months.	Right frontal and right ethmoid cloudy and outline indistinct.	Moshier operation on frontal sinus and ethmoid. Pus found. Cells soft and easily broken down. Pus discharge profuse.
35 J. H. G.	Post nasal mucous discharge—frequently yellow color, occasional occipital headaches.	Years.	Right sphenoid cloudy. Left uncertain.	No evidence of sinus disease.
36 Mrs. H.	Small amount muco-purulent secretion—occasional occipital headaches—partial nasal stenosis—frequent attacks of epipharyngitis.	Years—worse lately.	Right frontal sinuses cloudy and outline fairly distinct.	Muco-purulent discharge in posterior of nasal cavity. Operation refused.
37 Mr. H.	Plate taken six weeks after double Killian frontal sinus operation, slight mucous discharge—feels fine.	Six weeks since operation.	Both frontal sinuses cloudy and outline fairly distinct.	Sinus apparently healing up nicely. Discharge slight.
38 Mr. L.	Yellow mucous discharge—Partial nasal stenosis. Symptoms of asthma. Has recently had submucous resection of septum.	Years.	Right frontal and right anterior ethmoids cloudy and outline indistinct.	Muco-purulent discharge observed in middle meatus.
39 Miss M. C. E.	Nasal discharge resembling continuous cold. Dizzy when she stoops. Occasionally has one or two degrees of temperature.	Seven months.	Left frontal and left ethmoid cloudy and outline indistinct.	Tenderness at inner angle of orbit. Pus observed in middle meatus on both sides. Vacuines.
40 M. P. L.	Intermittent stenosis on left side—occasional muco-purulent discharge. Catches cold in head easily.	Years.	Left anterior ethmoids cloudy.	Ethmoids exenterated. Mucous present. Mucous membrane thickened.

CASE NO.	CHIEF SYMPTOMS	DURATION	X-RAY FINDINGS	CLINICAL FINDINGS
41 F. K.	Muco-purulent post nasal discharge—frequent pains over bridge of nose.	Weeks.	Right antrum and left ethmoid cloudy, outline indistinct.	Purulent secretion in olfactory tissue on right side. Muco-pus in epipharynx. Transillumination reveals cloudy right antrum. Antrum opened. Muco-purulent secretion removed.
42 Miss L. J.	Muco-purulent discharge from right nostril. Has had right middle turbinate and ethmoid removed but no relief.	Months.	Right ethmoid cloudy.	Muco-purulent secretion present in right nasal cavity.
43 Miss M. L.	Post nasal dropping of mucus.	Years.	Negative.	No evidence of sinus disease.
44 F. M.	Complete nasal stenosis on left side for six weeks. Nasal discharge especially from left. Odor.	Six months.	Cloudy left frontal—Ethmoid and antrum.	Sarcoma removed from left nasal fossa and antrum. Pus discharge from upper portion of nasal cavity.
45 Miss R. S.	Post nasal discharge and frequent colds.	Six years.	Negative.	Clear mucous discharge present in nasal fossa. Vacuoles given.
46 Miss O.	Intermittent nasal hyorrhea—hydrorrhea at present time for three days.	Three years.	Negative.	Watery discharge. No pus. Mucous membrane appears normal other than congested.
47 Mr. S.	Purulent discharge from right side of nose. Bad odor. Frontal and occipital headache. Had right middle turbinate removed one year ago. No relief.	Years.	Cloudy right frontal and ethmoid. Outlines indistinct.	Killian operation on right side. Sinus filled with pus. Membrane ulcerated and thickened.
48 H. S.	Post operative crusting and yellow mucous discharge on left side following removal of left middle turbinate.	Six months.	Negative.	Crust present. Mucous membrane pale and atrophic. Scar tissue and adhesions in region of middle turbinate.
49 D. A. C.	Nasal discharge from both sides. Headaches in frontal region.	One year.	Right ethmoid cloudy, left ethmoid slightly cloudy.	Right ethmoid exenterated. Yellowish crust. Cells contain muco-purulent secretion.
50 H. P.	Severe neuralgic pain in frontal region. Has had several intranasal operations without relief. Has no nasal discharge.	Twelve years.	Negative.	Clear mucous secretion in left nasal cavity.
51 C. S.	Frontal headache left side—pus discharge with bad odor.	One year.	Left antrum cloudy.	Antrum opened—pus found.
52 Mrs. S.	Nasal hyorrhea and mucous discharge. Sneezing. Has had polypi removal at former times.	Years.	Both ethmoids cloudy.	Polypi removal and ethmoids exenterated. Mucous membrane shows polypoid degeneration.
53 R. R.	Intermittent attacks of nasal hyorrhea.	Years.	Both ethmoids cloudy, right worse.	Mucous membrane appears thickened in region of middle turbinate. Mucous present. Operation in New York. No report of findings.
54 Miss M. R.	Pain and headache in right frontal region. Has had right middle turbinate removed one year ago with no relief. Glasses give no relief.	Two years.	Negative.	No evidence of sinus disease.
55 Dr. W. R. McC.	Partial nasal stenosis. Mucous discharge. Has had polypi removed one year ago.	Years.	Both ethmoids cloudy. Left bulla frontalis present and cloudy.	Thickened mucous membrane. Budding polypi. Mucous discharge.
56 Miss F. H. R.	Yellow pus discharge from nose. Both sides. Began with right frontal headache.	Three months.	Right frontal, left antrum and left ethmoid cloudy and outlines indistinct.	Pus observed in both middle meati. Tenderness on pressure over right frontal and ethmoid, operation refused.
57 Dr. M.	Frontal headache worse on left side. Partial nasal stenosis.	One year.	Negative.	No evidence of sinus disease.
58 Mrs. S.	Nasal hyorrhea, sneezing—worse on right side.	Months.	Right anterior ethmoid cells cloudy.	Right anterior ethmoid cells removed. Membrane thickened. Mucous present.
59 Miss L. W.	Muco-purulent discharge—frequent acute attacks of colds and headaches.	Years.	Right anterior ethmoids cloudy.	Muco-purulent discharge seen on both sides. Mucous membrane congested and swollen.
60 R. E. W.	Odor and nasal discharge from left side—frequent headaches.	Years.	Left antrum cloudy and outline indistinct.	Left middle turbinate covered with a white pus discharge. Pus removed from antrum.

CASE NO.	CHIEF SYMPTOMS	DURATION	X-RAY FINDINGS	CLINICAL FINDINGS
61 Mrs. E. A. S.	Frequent head colds—occasional nasal hydropy and rheu.	Years.	Negative.	No evidence of sinus disease.
62 Dr. M.	Blood discharge from right nostril. Swelling and induration in right supramaxillary region. Has had polyp removed and antrum and ethmoids opened three months ago.	Months.	Right frontal antrum and ethmoids very cloudy and outline of antrum and ethmoids lost.	Sarcoma of superior maxilla with involvement of nasal cavity.
63 Miss J. R. M.	Occasional pain over right eye.	Nine months.	Negative.	No evidence of sinus disease.
64 Miss T. M.	Crusts, odor and muco-purulent discharge (ozena).	Years.	Left anterior ethmoids slightly cloudy.	Chronic atrophic rhinitis with excessive amount of muco-purulent discharge.
65 R. R.	Muco-purulent discharge from right nostril. Years ago had fibroma removed from right nostril years ago.	Years.	Apparently a single large ethmoid cell on right side. Cloudy.	A portion of the anterior ethmoid cells removed. A subsequent X-Ray plate shows the absence of the involved ethmoid cell.
66 Miss McG.	Occasional dropping of mucous in post nasal space.	Years.	Negative.	No evidence of sinus disease.
67 I. R.	Nasal discharge—occasional odor—crust formation. Occasional frontal headache (ozena).	Years.	Left ethmoid cloudy.	Muco-purulent discharge in both middle meati.
68 J. W. N.	Pus discharge from left nostril. Three weeks ago had polyp removed from left nasal cavity.	Four years.	Left antrum and ethmoid cloudy.	Antrum opened. Pus and polypoid degeneration of antral mucosa found.
69 D. C. E. R.	Mucous discharge.	Years.	Both ethmoids cloudy, left more marked.	Muco-purulent discharge, mucous membrane in region of middle turbinate thickened.
70 Mrs. H. P.	Watery discharge from nose.	Six months.	Negative.	Both middle turbinates impacted against septum. No discharge visible.
71 Miss P.	Frequent head colds. Mucous discharge.	Years.	Negative.	No evidence of sinus disease.
72 Miss S.	Muco-purulent nasal discharge on right side. Months.	Months.	Right antrum cloudy and outline indistinct.	Muco-purulent discharge in right middle meatus.
73 Mrs. S.	Nasal discharge. Pain over right frontal region, accidentally shot self through right temple. Has had both middle turbinates removed.	One year.	Right sphenoid cloudy.	Sphenoid opened—muco-purulent secretions found.
74 Dr. S.	Frequent attacks of head colds.	Years.	Negative.	No evidence of sinus disease.
75 Dr. P.	Mucous discharge—impaired breathing.	Years.	Negative.	No evidence of sinus disease.
76 Dr. S.	Nasal discharge. Tenderness over right eye.	Six months.	Right antrum—ethmoid and orbit cloudy.	Sarcoma involving orbit ethmoid and antrum on right side (autopsy).
77 W. S. S.	Frequent attacks nasal hydropy. Asthmatic attacks. Has had polyp and ethmoid cells removed several years ago.	Years.	Right ethmoids cloudy.	Ethmoids curetted. Complete relief.
78 Miss W.	Purulent nasal discharge. Frontal and occipital headaches. Has had external operation on left frontal and both sphenoids opened.	Two years.	Left frontal, ethmoid, antrum and both sphenoids cloudy and outlines indistinct.	Opened left antrum, both sphenoids and left ethmoids. Muco-purulent discharge. Wassermann positive.
79 W. V.	Pain and headaches in frontal region. Nasal discharge. Has had repeated intra-nasal operations without relief.	Years.	Left frontal and left antrum cloudy and outline indistinct.	Muco-purulent discharge in left middle meatus. Operation refused.
80 Miss L. S.	Purulent nasal discharge.	Six months.	Right antrum cloudy and outline indistinct.	Antrum opened and pus found.
81 Miss E. W.	Purulent nasal discharge. Occasional pain over right eye. Had left antrum opened one year ago.	Years.	Left antrum, frontal and ethmoid cloudy.	Antrum frontal and ethmoid opened. Pus found mucous membrane thickened.

CASE NO.	CHIEF SYMPTOMS	DURATION	X-RAY FINDINGS	CLINICAL FINDINGS
82 W. E. W.	Slight nasal discharge on right side, right antrum irrigated. No relief.	Has had six months.	Right sphenoid cloudy.	Sphenoid not opened. Diagnosis not confirmed.
83 W. S. S.	Post nasal discharge of yellow mucous.	Seven years.	Posterior ethmoids slightly cloudy.	Not confirmed. Refused operation.
84 Miss R.	Muco-purulent nasal discharge. Frequent head colds.	Years.	Right ethmoids cloudy.	Nasal cavity almost occluded by deviation of septum to right.
85 Dr. C. M. M.	Has had both sphenoids opened. Both middle turbinates removed incidental to an acute infection of both antrums.	Six months.	Sinuses clear with slight dimming of the antral and sphenoid outlines.	No evidence of sinus infection.
86 Mr. S.	Nasal discharge left side.	Three months.	Left frontal cloudy and outline indistinct.	Muco-purulent discharge in region of left middle turbinate.
87 Mrs. W.	Watery nasal discharge worse on right side. Occasional right orbital pain.	Two years.	Right anterior ethmoids and right bulla frontalis cloudy.	Ethmoids removed and bulla opened. Membrane thickened.
88 L. W.	Supra-orbital pain and headaches.	Two months.	Negative.	No evidence of sinus disease.
89 O. B.	Post nasal discharge.	Years.	Negative.	No evidence of sinus disease.
90 Miss K.	Muco-purulent discharge from nostril. Occasional pain in left orbital region.	Three months.	Left antrum cloudy and outline indistinct.	Pus discharge from beneath anterior portion of middle turbinate. Pus washed from antrum.
91 H. C. K.	Nasal discharge of clear mucous. Frequent attacks of acute rhinitis with attacks of frontal headaches.	Years.	Right ethmoids cloudy.	Operation refused. Mucous discharge. Membrane over middle turbinate thickened.
92 C. W.	Nasal discharge left nostril. Pain over left side of face.	Two years.	Left antrum cloudy.	Mucous in antrum. Membrane thickened.
93 C. B.	Muco-purulent nasal discharge worse on left side.	Two months.	Left frontal cloudy.	Pus discharge in region of left middle turbinate.
94 H. M.	Pus discharge and small crust formation with slight odor at times.	Years.	Left antrum cloudy and outline indistinct.	Pus emerging from beneath both middle turbinates. Small amount of muco-purulent secretion in left antrum.
95 Mrs. L.	Nasal hyorrhea—occasional occipital headaches.	Five years.	Both ethmoids cloudy.	Muco-purulent secretion in right superior meatus. Mucous membrane of ethmoids thickened.
96 Mrs. L.	Orbital pain and headaches. Left antrum opened fifteen years ago.	Months.	Negative.	No evidence of sinus disease.
97 Miss B.	Frequent frontal headaches. Tenderness over left frontal. Dizziness on stooping.	Months.	Negative.	No evidence of sinus disease.
98 C. A.	Bulging, fluctuating swelling over region of right frontal sinus.	Two months.	Large triangular cloudy area involving frontal sinus and extending upwards into frontal bone.	Large cyst of frontal bone filled with fatty substance.
99 Mrs. L.	Repeated attacks of acute rhinitis and watery discharge.	Years.	Left posterior ethmoids, slightly cloudy.	Mucous discharge.
100 F. V.	Nasal stenosis left nostril. Watery left eye.	Two months.	Dark left antrum and nasal cavity.	Large round tumor ⁸ mass (Larymphangio-endothelioma) filling left nasal cavity and left antrum. Tumor removed. Polypoid degeneration of antral mucosa. Pus and mucous found.

In the group where a nasal discharge was absent, but pain or headaches present, there were thirteen cases (13%). Eleven (84 $\frac{2}{3}$ %) were negative and two (15 $\frac{1}{3}$ %) were positive. Neither of these positive cases (No. 8 and 30) were confirmed.

There were six cases (6%) of intermittent nasal discharge. Four (66 $\frac{2}{3}$ %) were negative and two (33 $\frac{1}{3}$ %) were positive.

The chief complaint in ten cases (10%) was a post nasal discharge. Six (60%) of these were negative and four (40%) were positive. One of the positive cases No. 83) was not confirmed.

There were nine cases (9%) whose chief trouble was a constant or intermittent nasal hydrorrhea. Three (33 $\frac{1}{3}$ %) of these were negative and six (66 $\frac{2}{3}$ %) showed some sinus disease. Of the six positive cases, one case (No. 99) was not confirmed. Six cases (6%) suffered from asthma. One patient (16 $\frac{2}{3}$ %) had negative sinuses, the remaining five cases (83 $\frac{1}{3}$ %) were positive.

Chief Symptoms	No. of Cases	X-Ray Neg.	Per Cent.	Neg. Cases Con- firmed Clinically.	Sinus Involvement.	Per Cent Involved.	Positive Cases not Confirmed.	Per Cent of Cases not Confirmed.	Cases not Confirmed
Constant Nasal Dis- charge Without Pain or Headache	23	3	12½	3	20	87½	3	12½	25, 82
Constant Nasal Dis- charge With Pain or Headache	17	..	....	..	17	100	1	5%	91
Intermittent Nasal Discharge	13	11	84½	11	2	15½	2	15½	8 30
Post Nasal Dis- charge	10	6	60	6	4	40	1	10	83
Nasal Hydrorrhea	9	3	33½	3	6	66½	1	11	99
Asthma	6	1	16½	1	5	83½	..	....	..
Nasal Tumors	7	..	....	..	7	100	..	....	..
Polypi	5	..	....	..	5	100	..	....	..
Miscellaneous	4	..	....	..	4	100	1	25	16
Total	100	28		28	72		9		

Tumor formation other than polypi was present in seven cases (7%). All (100%) revealed cloudy sinuses on the affected side. There were four sarcomas, one carcinoma, one lympho-endothelioma, and one fatty cyst involving the frontal sinus, frontal bone and orbit. Six cases (6%) had a polypoid degeneration. All (100%) showed one or more sinuses cloudy. One case (1%) was interesting inasmuch as the polyp which was filling the posterior portion of the inferior meatus apparently had its origin from the antrum. There were two (2%) of chronic atrophic rhinitis (ozcna). One case (1%) of hay fever. All three cases were positive, although confirmation was

not obtained in the hay fever patient (case No. 16). One case (1%) was taken about six months after both sphenoids had been opened and the middle turbinates removed incidental to an acute infection of the antrums and sphenoids. At the time the plates were taken, there were no symptoms or clinical evidence of trouble. The plates showed the outlines of the sphenoids and antrums were not clear.

CONCLUSIONS

1. The chief difficulties in deriving the full benefits of the roentgenogram properly taken and developed is (a) reading the plate, that is determining the presence or absence of abnormal shadows or outlines; (b) having properly interpreted the plates the correlation of these findings to the clinical data obtained. To do this the various modifying conditions mentioned in the first part of this paper must be considered.
2. The x-ray is a valuable supplement to clinical diagnosis and when so combined, error in diagnosis is reduced to a minimum.
3. Valuable surgical information can be gained as to the presence or absence, size, shape, depth, etc., of the sinuses.
4. Thickenings of the mucous membrane of the sinuses due to former operations, infections, irritations, etc., will produce a cloudy appearance or an indistinct outline of the sinus in the plate.
5. As a guide to the post-operative progress the x-ray is of little assistance in the chronically diseased sinuses.
6. The x-ray is usually essential to determine the fact that the involvement is confined to certain sinuses, sinus or part of a sinus.

REFERENCES

1. Berry, H. M.: Roentgenography in Diagnosis of Diseases of Accessory Nasal Sinuses. Arch. of Roentgen Ray, London, May, 1915, No. 12.
2. Caldwell, E. W.: Skiagraphy of Acc. Sinuses of Nose. American Quarterly of Roentgenology, 1908.
3. Beebe, H. M.: Skiagraphic Diagnosis of Nasal Accessory Sinuses. Journal of Ophthal., Otol., and Laryn., April, 1915, p. 319.
4. Rhese: Die chronischen Entzündungen der Siebbeinzellen und der Keilbeinhöhle; mit besonderer Berücksichtigung ihrer Beziehung zur allgemeinen Medizin und ihrer Diagnostik durch das Roentgenverfahren, Arch. f. Laryngol. u. Rhinol., 1910, xxiv, 383.
5. Walters, C. A., and Waldron, C. W.: Modification of Occipito-Frontal Position in Roentgenography of Nasal Accessory Sinuses. Amer. Jour. of Roentgenology, Feb., 1915.
6. Waldron, C. W.: Roentgenography of Accessory Nasal Sinuses with Special References to Sinuses in Children. Interstate Med. Jour., Oct., 1915, xxii, 1031.
7. Pfeiffer, W.: Eine neue roentgenographische Darstellungsmethode der Keilbeinhöhlen. Arch. f. Laryngol. U. Rhinol., 1910, xxiii, 420.
8. Bowen, D. R.: Roentgen Examination of the Sphenoid Sinuses. Amer. Jour. Roentgenology, Oct., 1914.

ARMY MEDICAL CORPS KEEP EFFECTIVE 93¾

OUT OF 195,000 WOUNDED, 182,000 HAVE RECOVERED

The record of the Army Medical Department in despatching its duties of war stands out in bold relief as one of the greatest accomplishments in the records of medicine.

RECORD OF DISEASES COMBATTED

Statistics show beyond all dispute that the American Army was the healthiest and cleanest army that ever fought. By far the greatest toll of deaths from disease was taken by pneumonia and influenza during the general epidemic that at the time was world wide. Deaths in the Army from this cause are placed at 8,000. There were only 1,000 cases of typhoid, fifty of which were fatal; venereal cases never exceeded 4 per cent, an exceedingly low figure in an army in the field. Dysentery was present at one time, but this was checked before it reached the epidemic stage.

When the American troops arrived in France, there was great difficulty in securing hospital space and the first wounded found themselves housed in all manner of buildings, from choice edifices of imperial foundation down to humble and none too clean municipal halls in the French villages. There were, at the close of the war, 153 base hospitals, sixty-six camp hospitals, and twelve convalescent camps in France alone. One of the best known hospitals was that established in the Ecole de la Legion d'Honneur, at St. Denis, quite close to Paris, where many of the wounded from Chateau-Thierry were brought.

IMPROVISING YANK HOSPITALS

The great Haviland china factory at Limoges was turned over to the Americans for hospital purposes and the library of Orleans was stripped of 100,000 books to make room for the narrow cots and operating tables. In Vichy, hospitals were established in eighty-seven hotels, while seventy other hostelries were similarly converted in and around Vittel and Contrexville. Two of the outstanding features of American hospital work in France were the great hospital centers such as Mesves with 25,000 beds and the mushroom 1,000-bed "Type A" hospitals, that standardized all American-built hospitals in France.

Summing it up, the Army Medical Corps and the Red Cross were able to keep 93¾ per cent of the fighting forces effective for duty at all times and of the remaining 5.7 per cent only 3.4 per cent were incapacitated through disease. This is a record on which the Army and the Red Cross can look back with satisfaction.

GASTRIC CELL ATROPHY

A. BASSLER, New York (*Journal A. M. A.*, Aug. 9, 1919), after noting the different achylic conditions of the stomach, namely: (1) those that seem normal to the individual; (2) conditions in psychologic cases; (3) those due to reduced general bodily state; (4) endocrinitic or hormone disturbances of which

we know little, and (5) pathologic conditions of the stomach glandularis, in which the secreting ability is destroyed by disease of the essential elements, namely, the acid and the central cells, adds that to the last the term "atrophic gastritis" is better adapted than achylia, as it expresses pathology instead of only a symptom. He reports studies on the stomach glands made on the cadaver for the purpose of finding the factor or factors producing this condition, and later studies of routine clinical cases. While he deduces no definite conclusions, he is led to offer the following suggestions: "1. Pathologic studies suggest that essential cell atrophy in the stomach is quite a common condition. 2. Cellular atrophy can be a true primary atrophy, and instances in which it is primary should be distinguished from the forms secondary to chronic gastritis. 3. In primary cell atrophy, the destruction is, in all probability, due to toxic effects from focal infections gaining lodgement in the spongy glandularis, or from bacteria culturizing in the stomach glandularis or stomach contents. 4. The bacteria studied in test meals are important in this connection, the organisms, particularly when actively motile in the test meals, being significant. 5. Distinction should be made between the pathogenic and the fermentative organisms in test meals, not only because of an explanation of the achylia, but because of the suggestion that focal infection probably exists somewhere in the body. 6. Vaccines made from test meals are of no benefit in the cases, either subjectively or objectively, the removal of the focal infection being more important for benefit to the subjective stomach symptoms, as well as to the body in general. 7. With the subjective stomach symptoms alone, the old method of treatment, with gastric lavage as an addition to the lactofarinaceous diet and alkalis and pancreas preparations proved to be the best treatment, although in no case was there any return of normal acid or proenzymes. 8. When primary cell atrophy has taken place, the loss of gastric juice secretion is as permanent as when the atrophy is secondary to a chronic gastritis."

CHILD HUNGER IN A LAND OF PLENTY

According to the Children's Bureau of the Department of Labor, from three to six million American children are not getting enough to eat. More than one-fifth of the school children of New York City are undernourished and the percentage for the country is even higher. In many instances on account of prohibitive prices parents cannot give children suitable food. Malnutrition and malnourishment are technical terms employed by Government investigators, that merely mean that a great many of our children do not get sufficient food. Yet the war left our crops unravaged, and, according to General March's statement before a Congressional Committee, there was food in plenty allowed to rot in warehouses. There is a Pan-American Association to conserve child-life in Latin American countries. Surely our own little ones merit the attention of some active association.

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DECEMBER, 1919

Editorial

THE JOURNAL INCREASED TO ONE HUNDRED TWENTY-EIGHT PAGES.

This is some record for a state medical journal. No other similar state publication approaches it in size. Our four nearest competitors are as follows: 80, 78, 68 and 68 pages, respectively. Two of these are printed in New England and two in the Central West. Only

two weekly or monthly medical journals in America are larger than the ILLINOIS MEDICAL JOURNAL. Both of these are national, and we might say international, in character.

We do not comment on this in a boastful spirit, but it is with a feeling of great satisfaction that we announce our ability to maintain a journal of this size.

We are the official organ of the Illinois State Medical Society, one of the largest, most active and influential of any of the state societies, and publish also the papers of the Chicago Medical Society (the largest local medical society in the world) and the Tri-State Medical Society (comprising Iowa, Wisconsin and Illinois).

On the programs of these societies appear from time to time many of the greatest medical men of both American and Europe. We are thus fortunate in being able to secure from many of the best known doctors a vast amount of material of the highest quality. In this way we are guaranteed sufficient medical data to maintain the JOURNAL at a high degree of efficiency.

THE EVOLUTION IN MEDICAL PRACTICE AND THE OPEN HOSPITAL IDEA.

In our November issue we had an editorial entitled "The Evolution in Medical Practice and What Ails the Medical Profession," in which we pointed out a long list of conditions that are seriously and unfavorably affecting the medical profession, and which, if not counteracted, are bound to bring about the elimination of medicine as a profession.

In this issue we touch upon the subject of the open hospital as one of the many remedies recommended in the solution of the problems mentioned.

The open hospital idea, it appears, is bound to become an acute issue with the profession in the very near future.

Indeed it is today an issue in Greater New York and other eastern cities, where the slogan is "Open the doors of public hospitals," and their arguments for doing so are as follows: The function of public hospitals as post-graduate schools has been entirely too long overlooked. Medicine of today is too complex as compared with that of the past to expect a doctor to maintain a high

degree of efficiency if he is removed from hospital influence.

If this is true at the present time, it will be more so in the future. We must realize that conditions have changed and with these changes we must change also. The educational advantages of public hospitals are equally as educational when applied to graduates as when applied to undergraduates.

The public hospitals belong to the county or municipality and should be opened to the doctors of the community.

The only argument against it promulgated by its opponents is that it may tend to inefficiency. Its sponsors maintain that the opposite is true, namely, that it is a measure promoting efficiency and that it provides for the greatest good to the greatest number.

Further, they maintain that present conditions are erroneous and that, if a physician is capable of practicing his profession in the community, he is no less efficient and capable of practicing in a hospital, or if a man is not capable of practicing in a hospital he should not be permitted to practice in a community. The indigent sick should be protected, but why should this protection be confined to the indigent class?

They further contend that the hospital is erected and maintained by the taxpayers and should be open to all who are in need of hospital facilities, and the doctor should have the right to follow his patient through its portals and use the means at hand which his money as a taxpayer and his labors as a public citizen provide.

Further, that the ambulance at the door should not ring the death knell of his claim to his patient, but rather should mark the beginning of a splendid opportunity for increased efficiency; that the public hospital should not be the great divide, but rather the open way to increased opportunity and efficient service to the physician and patient.

Whether you are ready to accept this spontaneously or not, there is certainly room for thought, especially in view of the changing conditions which are making the per capita of patients less and less numerous and, therefore, making it incumbent upon the doctor to retain the largest percentage of his clientele possible.

This much is certain, that the trend to hospitalization of the sick is being forced upon us; that the rich as well as the medium and poorer classes will ultimately be forced to use hospital

facilities. Because of the present trend of investors to build only two and three-room apartment buildings, because of the difficulty in securing help which is rapidly becoming prohibitive, because of the increased cost of living and because of economic reasons as well as inability to provide facilities for care in their homes and many other items, the sick will ultimately be forced to go to hospitals.

That the open hospital is not an experiment is proven by the following: The Louisa Minturn Hospital for scarlet fever and diphtheria patients, at the foot of East 16th street, Borough of Manhattan, announces its eighteenth consecutive year of service in the care of scarlet fever and diphtheria patients.

Any duly licensed physician may send patients to the hospital and care for them while there. There is no house physician in attendance.

Eighteen consecutive years of service in dealing with contagious diseases. Intimately in touch with health department work, requiring absolute supervision and proper adherence to the rules in these cases. Is this not a powerful argument in favor of open hospitals?

And this institution is not alone in this matter. St. Mark's Hospital, Manhattan; the Colored Home and Hospital, Manhattan; Flushing Hospital, Flushing, L. I.; St. John's Hospital, Long Island City; Prospect Heights Hospital and Samaritan Hospital, Brooklyn, have all adopted the "open" policy and with marked success.

In Connecticut any duly licensed practitioner can operate in or use the private rooms of any hospital for his patients. In Detroit, Cincinnati, Philadelphia and many of the smaller cities the same system prevails. In Pennsylvania in 1916 a law was introduced into the legislature making the refusal of any hospital to allow a physician to treat his case a ground for cutting off their appropriation.

Why do not other hospitals follow the lead of these eastern institutions?

Can it be that Chicago, the foremost city of the United States, is far behind all other cities in medical matters? Physicians in the west fail to realize that, with the great progress made in medicine during the last twenty years, unless the hospitals are open to the general medical community, it must lead to one inevitable result—the efficiency of a few and the inefficiency of the

many. As most of the vast work in medicine is done by the many, this inefficiency must react to the detriment of the citizens, who by their taxes are rearing and supporting these large institutions, which in turn are becoming monopolies; and it is axiomatic that where there is monopoly there will be, and there must exist, abuse.

A certain number of patients will demand the attention of their family physician when in quarantine from contagious disease. Too, in most cases the patient is willing to pay for the services of their regular physician while in quarantine. Such an arrangement spells greater efficiency and also helps to maintain the much desired relationship between patient and doctor. The feeling of confidence so engendered is a great factor in promoting early restoration to health.

In the interest of the sick, choice of physicians should be granted the patient when in a public hospital, and it is the duty of the profession to ask for it, because of the better service and kinder attention which they could bring about by their personal interest in the patient and the hospital.

The public hospitals should be open to all the medical profession under proper supervision; then will the so much wanted value to the public health be brought to its maximum efficiency.

DO DOCTORS, LIKE THE SPHINX, LOOK ALWAYS TOWARD THE EAST? IS THEIR EDUCATION ONE SIDED?

Business men and men of affairs generally claim that the doctor's education is unbalanced and that he has a narrow perspective. That like the sphinx, with all its wisdom, he looks continually and narrowly in one direction, namely, only to the east. That he has no vision for the north, south or west.

In this connection we call your attention to the article in this issue by Robert J. Folonie, counsel for the Illinois State Medical Society, who as the attorney for the Medico-Legal Committee, has defended hundreds of physicians in medico-legal cases. Mr. Folonie is a good judge of human nature and his familiarity with the shortcomings of the profession entitles him to speak with authority on the broader side of the doctor's life.

We believe with Mr. Folonie that the doctor's

reading should embrace the circle of the whole world of information. The remarkable events that are being enacted in our day have brought every man and woman in the United States in close touch with all other peoples and countries, and certainly the doctor, above anybody else, should be in touch with what is going on in the world of affairs.

In order to prove or disprove to your own satisfaction whether your education is a one sided one or not, we submit the following tests, which we ask you to read carefully and ponder over before looking at the answers in the footnote:

TEST 1.

1. What acid is contained in vinegar?
2. How many men compose a football team?
3. What popular stringed instrument originated in the Hawaiian Islands?
4. Of what country is the eucalyptus tree native.
5. What is mixed with crude rubber before it can be vulcanized?
6. On what date does the President assume office?
7. On which island of the West Indies did Columbus first land?
8. What is the largest river in Alaska?
9. Who wrote the Penrod stories?
10. With what religious order is Katherine Tingley connected?
11. Who is the Grecian Goddess of Love?
12. Who is often pictured looking for an honest man with a lantern?

ANSWERS.

1. Acetic; 2, 11; 3, ukulele; 4, Australia; 5, sulphur; 6, March 4; 7, San Salvador; 8, Yukon; 9, Tarkington; 10, Theosophy; 11, Venus; 12, Diogenes.

TEST 2.

1. In what city is the Eiffel tower?
2. Who was the president of the confederate states during the Civil war?
3. Who won the world's heavy championship from John L. Sullivan?
4. Who was the little boy in the Mother Goose stories who sat in the corner?
5. Who produced the motion picture called "The Birth of a Nation?"
6. In what state is the Imperial valley?

7. Who wrote the "Shepherd of the Hills?"

8. What famous English yachtsman built the "Shamrock?"

9. What bird lays the smallest eggs?

10. What is the lightest gas used commercially?

11. From what are fruit raisins made?

12. What term is used to refer to brokers who try to lower the price of stock?

13. Name the seven mightiest planets.

ANSWERS.

1, Paris; 2, Davis; 3, Corbett; 4, Jack Horner; 5, Griffith; 6, California; 7, Wright; 8, Lipton; 9, humming bird; 10, hydrogen; 11, grape; 12, bears; 13, Mercury, Mars, Venus, Jupiter, Saturn, Neptune and Uranus.

TEST 3.

1. What deposed president of Mexico was assassinated?

2. What is a small Chinese sailing boat called?

3. Who is president of the American Federation of Labor?

4. Which is the largest of the Great Lakes?

5. Who is the most famous lyric soprano of the Chicago Grand Opera Company?

6. What metal is used in thermometers?

7. How many hours is the difference in time between New York and San Francisco?

8. At what city was the expression, "They shall not pass" made famous during the war?

9. In what sport is Barney Oldfield famous?

10. Who is the recognized leader of the Zionist movement?

11. What aviator is called the "flying parson?"

12. Who is in command of the troops at Gary, Ind.?

ANSWERS.

1, Madera; 2, junk; 3, Gompers; 4, Superior; 5, Galli Curci; 6, mercury; 7, 3; 8, Verdun; 9, auto racing; 10, Brandeis; 11, Maynard, 12, Wood.

TEST 4.

1. What Spanish explorer first conquered Mexico?

2. Who is the Italian at the head of the troops in Fiume?

3. What is the name of the ocean stream which warms the British isles?

4. What biblical character was considered to be wisest?

5. What is the chief executive of a city called?

6. What country is the native home of St. Bernard dogs?

7. For what American poet was the arm chair made from the Washington elm?

8. What is the most popular sport played on ice skates?

9. Of what gas besides oxygen is air mainly composed?

10. What is the part of an auto called which mixes the gasoline and air?

11. What stitch made on a sewing machine is most easily ripped?

12. How many sheets of paper are in a quire?

ANSWERS.

1, Cortez; 2, D'Annunzio; 3, Gulf; 4, Solomon; 5, Mayor; 6, Switzerland; 7, Longfellow; 8, hockey; 9, nitrogen; 10, carburetor; 11, chain; 12, 24.

—From the *Chicago Evening Journal*, copyright 1919 by The Press Publishing Co.

EDUCATIONAL AUTOCRACY.

The doctors of Illinois are not unfamiliar with the attempt to create an educational oligarchy. We are all familiar with the dictatorial attitude of the Department of Education and Registration of Illinois in their attempt to force upon the medical profession a form of legalized despotism.

A greater menace exists in Washington, in the attempt to pass through congress a bill known as the "Smith-Towner" bill for the establishment of a federal dictatorship over the local schools. It is the desire of a certain element in this country to have the affairs of state administered by an autocracy. The people of America should not soon forget that it was autocracy that was responsible for the World War, which cost the lives of nearly ten million of the world's youth. Autocratic control was the plan of Bismarck, who said in substance: "That if Berlin could plan the schools, he did not fear for the permanency of his policy." In a government like ours, completely dependent upon an alert, educated electorate, institutions so founded and ruled that they cannot be used for purposes of political propaganda, are fully as necessary as a free press and the right,

within the limits imposed by justice, charity and common sense, of free speech upon any subject.

The Smith-Towner bill attempts to make believe that its purpose is to establish federal co-operation with the States, and federal stimulation in the matter of education. Any person with a grain of common sense and a half grain of reasoning ability knows perfectly well that what the federal government finances the federal government controls, to the crossing or dotting of the last "t" or "i."

Note what two ex-speakers of the house of representatives and others say about the Smith-Towner bill. Ex-Speaker Joe Cannon is viewing with alarm the persistent efforts to intrude the federal government into concerns over which the States alone have jurisdiction. In discussing the federal vocational rehabilitation bill, another co-operative scheme, and the most socialistic piece of legislation ever brought to Washington, on October 16th, he said:

During this congress, you are to bring in a bill here, to make the Commissioner of Education a Cabinet member. God knows, if I had the power, I would have fewer Cabinet positions than now, because they could be administered without duplication and at far less expense, and perform their duties by giving service more promptly than is now given. I agree with Mr. Speaker Clark that we have Cabinet officers enough. I am opposed to the creation of any more. Yet, I am informed that the next step is to create a Department of Education. The States are caring for education. A Department of Education, located in Washington to boss the education of the whole country, would be injurious to education in the States.

Let us be honest with each other. When you read this bill through (Vocational Rehabilitation Bill) read it clear through, and you will find that the Commissioner of Education, with his associates, living in Washington—you will find it so drawn that the whole thing is to be controlled and managed from Washington.

You had better leave these matters of caring for the citizens in the various States, to the States. (*Congressional Record*, October 21, p. 7728.)

And this from Ex-Speaker Clark:

Every man in this house who has three ideas above a Hottentot is devoting his thought to cutting down tax bills instead of increasing them; and pursuing the principle that it is not the duty of the federal government to do for the States and for the citizens things which they should do for themselves.

Any man in this country, who will allow his children to grow up bowlegged, ought to be put in the penitentiary or the insane asylum. It is easy to cure, and yet walking down the street yesterday

I saw a man, and the biggest hog in the State of Missouri could have run between his legs and never touched them at all. Bowlegs should be straightened, but I humbly submit that it is not Uncle Sam's duty.

Why do not parents take care of that thing, instead of coming to the congress of the United States to have bowlegs and other afflictions like that cured? We have got to cut down these appropriation bills. Oh, they say, it will only cost a million; but that is a starter, that is the camel's nose under the tent, and you all know it—any of you that are fit to be here, know it. There is a bill coming up that proposes to make a Cabinet member of the Commissioner of Education, a Secretary of Education, and I am against it. The first thing you know, they will have as many employes down there in that Bureau of Education as they have in the War Risk Bureau, with its 14,000 employes jostling each other around in each other's way.

Whenever that bill comes in here to make a useless department out of the Bureau of Education, I am against it, and I will use every parliamentary means at my disposal to beat it. The United States government cannot do everything; it is utterly impossible. The best thing for congress to do would be to pass a resolution, directed to the States, advising them to resume their governmental functions (applause) and let us alone. The milk in this cocoanut is to create a lot of nice new jobs. (*Congressional Record*, October 11, p. 7141.)

And this from Mr. Echols, of West Virginia. On October 17th he said:

If some department should come to Congress, and ask an appropriation to construct a cold-storage plant in Hades or to regulate the affairs of paradise, . . . I am inclined to the opinion that it would be looked upon with some favor, providing such appropriation could be made the excuse for placing a few more employes on the Federal payroll. It occurs to me that with the Government running three and a half billion dollars short for the year, it is time to stop appropriations of money on the mere ground that they may be desirable, and might possibly, in some remote way, reduce the high cost of living, or help some cripple whom the Government is under no obligation whatever to take care of. (*Congressional Record*, October 20, p. 7657).

In speaking of the Vocational Rehabilitation bill, the proponents on the floor of the House claimed that this, like the Smith-Towner bill, would in no sense interfere with the right of the state to conduct courses as it saw fit. Note this conversation that took place on the floor October 14th:

Mr. Fess: . . . I do not think this Congress wants to allow the Federal Government to step over into the States, and dictate what shall be done in the States. This would be done by the State Boards on approval of the Federal Government.

Mr. Johnson of Washington: It (the bill) says that it shall be under a general plan of supervision determined by the Federal Board, and it is either that or nothing, probably. If that is not the case, I should like to know.

Mr. Fess: No money will go from the Federal Treasury, unless the use of it is to be approved by the Federal Board, and this is by a general plan or provision.

Mr. Johnson of Washington: *Then there will be no escape from what the Federal Board proposes; and we have been through that before.*

Mr. Fess: The Federal Board will probably do something about the manner in which the administration of the appropriation in the State will take place, but it is wholly a matter of the States, with the approval of the Federal Board.

Mr. Johnson of Washington: *The Federal Board telling the State what to do.* (Congressional Record, October 14, p. 7272).

In the course of an earlier debate, this undeniable fact of Federal domination was brought out in the following colloquy:

Mr. Smith of Michigan: Does the State or the Federal Board prescribe the training that shall be given?

Mr. Fess: It must be done upon their approval.

Mr. Smith of Michigan: The approval of the Federal Board or of the State Board?

Mr. Fess: *Upon the approval of the Federal Board.* (Congressional Record, October 9, p. 7045).

And this really sums up all that is to be said on the subject. "Cooperation of the Federal Government" with the respective States, means in practice that the Federal Government dictates and the States obey, or get no money.

And this final contribution from Hon. John MacCrate of New York:

I will not permit my vote on this bill to be used in the future as a bludgeon to batter me into support of a bill federalizing the educational systems of the entire nation. . . . No such argument, however, [stimulation, etc.] can be used for the adoption of any plan to centralize educational control in Washington. With the first settlers on this continent came the schoolmaster, and with the first clearing of the forest a place was provided for the education of childhood. Throughout our colonial history and throughout the formative period of our national life until today, appropriations for education have gone forward. We have our public schools and our private schools. Hundreds of millions of dollars are spent annually by municipal and State governments and by churches of all denominations, and by private individuals, to give the youth of the land free educational opportunities. Our fathers and mothers have submitted uncomplainingly to taxation, and have generously contributed to every style of school affording mental and moral development for their offspring. *The time will never come when the people of this nation will permit the*

control of the intellect of childhood to be centered in a bureau at Washington, under the guise of a plan to "encourage the States." (Congressional Record, October 20, p. 7660).

The old saying, that "A burnt child dreads the fire," is quite applicable here. We in Illinois have been through the getting-singed process. We are today feeling keenly the evil effects of an educational autocracy. Autocracy is bound to breed bolshevism and we have too much of this in America today. We want neither the Smith-Towner bill nor any other form of one-man dictation in education.

Doctor, have you studied this bill? Are you familiar with its far-reaching evil effects? If not, familiarize yourself with it at once and immediately impart your opposition to your representative and the senators from your state. Your protest cannot be too strong or too vigorous.

NOTICE

Any member of the Illinois State Medical Society desiring to read a paper before the Surgical Section at the next meeting in Rockford is requested to furnish his name, address and title of paper to the undersigned, not later than Feb. 1, 1920.

Geo. S. Edmonson,
Secretary Surgical Section,
Clinton, Ill.

KEEPING ABREAST WITH THE TIMES.

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ALL MEN NOT BORN EQUAL AND THE FALLACIES OF SOCIALISTIC LOGIC.

No two persons are alike. No two men are equal. Democracy means equality of opportunity so far as the ability of the individual exists. No

two men can be born equal unless they are born exactly alike.

Socialists who are attacking the employers of labor have unconsciously laid bare one of the fundamental fallacies of the cult. They urge that the laborers in the factory have made the machines and, therefore, are entitled to the full share of the profit of the industry.

This theory is based upon the assumption that the only thing of value in the world is physical strength. It gives no consideration to the brains that conceive, to the initiative faculty that promotes a project, or to the foresight that creates opportunity for the laborer. The flunky who officiates about the White House puts in as much time and physical energy as the President of the United States and by this socialist logic should receive the same wages. The private who charges with fixed bayonet destroys more of the enemies of his country than the general who plans the attack and should receive more recognition.

Only in a limited sense are all men born equal. They were not created by the Almighty with the same amount of brains, the same physical powers or for the same position in the world. The Creator who made the material elements of different values, who created flowers of various aroma and beauty and birds of diverse plumage—made men of different molds and destined for different work in the busy world. Some were made to command, others to obey.

The Creator never intended that all men should equally enjoy the fruits of the earth. The poor will always be with us. Some will be poor as the result of misfortune or the fault of others. Others will be poor by reason of personal indifference or want of industry. Their poverty is just retribution.

No matter what opportunities we may provide, or how far we may go in the development of higher standards in our social relations, we shall always have individuals who by reason of their limited physical, mental and moral powers are unable to provide for themselves. These will need the special protection of the community.

Everywhere throughout the world there is a class in each community who have always before them a picture of a workless world. Dreamers who think they can legislate or cajole their way to Utopia, and thence to Kingdom Come. The real men who put the dynamic force behind af-

fairs and into the business of everyday life—the men who love individual ambition, industry and intelligence—do not approve of these dream pictures. They believe the world can never be made safe for democracy when the affairs of state are administered from dream books. The real men of the world would not surrender their independence, their initiative, their self-dependence for idleness in a palace, were that possible. It is the game of life that makes existence worth while. The joy of wanting things is killed by having them without effort. Real men and women in the game of life want only a fair field and no favors.

OSTEOPATHS NOT LEGALLY ENTITLED TO ISSUE BIRTH CERTIFICATES.

The following opinion from the attorney general of Illinois speaks for itself:

STATE OF ILLINOIS

LAW DEPARTMENT

SPRINGFIELD

File No. 9701.

Medicine and Surgery.

October 23, 1919.

Dr. C. St. Clair Drake,

Director, Department of Public Health,
Springfield, Illinois.

My Dear Doctor Drake:

I have your letter of recent date, wherein you inquire if an osteopathic practitioner may legally make and sign a certificate of birth.

There are several provisions of the statute which affect the question. Section 12 of the act providing for the registration of births and deaths (Par. 30, chap. 111½, p. 2268, Hurd's Stat. 1917) provides, in part, as follows:

"It shall be the duty of the *attending physician* or midwife to file a certificate of birth, properly and completely filled out, and in a form prescribed by the State Board of Health, with the local or sub-registrar of the district in which the birth occurred within ten days after the date of birth."

It seems clear that the term "attending physician," as used in the above section of the statute, has reference to a physician who may be in attendance lawfully. Therefore, if an osteopathic practitioner without a license to practice medicine and surgery in all their branches and without a license to practice midwifery, may not lawfully practice obstetrics or midwifery in this State, then such practitioner may not legally make and sign a certificate of birth.

Almost without exception, the cases passing upon the question hold that the practice of obstetrics and midwifery is the practice of medicine, within the

meaning of statutes forbidding persons without certain statutory qualifications to practice medicine. 13 Ann. Cas. 571.

The provisions of the Medical Practice Act of this State go far toward showing that the act contemplates that a confinement case having professional attendance calls for the practice of either obstetrics or midwifery, and that it does not contemplate that a practitioner who holds a license to treat human ailments without the use of drugs or medicine and without operative surgery may lawfully attend such a case. Section 11 of the act (Par. 15, chap. 91, p. 1919, Hurd's Stat. 1917) expressly excepts the subject of obstetrics from the subjects of examination of those who desire to practice systems of methods of treating human ailments without the use of drugs or medicines and without operative surgery, and further provides that if the applicant is a graduate of a professional school in which the subject of obstetrics, as taught therein, is deemed equal to that taught in a medical college, reputable and in good standing, he may, on his request, be examined in the subject of midwifery.

In view of the above quoted provisions of the statute, I am of the opinion that an osteopathic practitioner, who is without a license to practice either midwifery or medicine and surgery in all their branches, but who holds a license merely to treat human ailments without the use of drugs or medicine and without operative surgery, may not lawfully act as an attendant at a childbirth, and hence may not lawfully make and sign a certificate of birth. I am also of the opinion that this construction of the statute is not subversive of the words "and to practice such treatment in accordance with the tenets of the school of practice designated by applicant under the provisions of section four of this act," as used in paragraph 17, chapter 91, page 1919, Hurd's Statutes 1917, because the phrase "such treatment" manifestly has reference to treatments which a person who holds a license to treat human ailments without the use of drugs or medicine and without operative surgery may lawfully give.

Yours very truly,

(Signed) _____,
Attorney General.

BOYLSTON MEDICAL PRIZES

These prizes, which are *open to public competition*, are offered for the best dissertation on questions in medical science proposed by the Boylston Medical Committee.

At the annual meeting held in Boston in 1916 a prize of three hundred dollars was awarded to an essay entitled "Studies of the Streptococcus of Smith," by Wilson G. Smillie, M. D., of Cambridge, Mass.

For 1919 there is offered a prize of three hundred dollars and the Boylston Prize Medal, for the best dissertation on the results of original research in medicine, the subject to be chosen by the writer. The Boylston Prize Medal will be added to the

money prize only in case the winning essay shows special originality in the investigations detailed.

Dissertations entered for this prize must be in the hands of the Secretary, H. C. ERNST, M. D., Harvard Medical School, Boston, Mass., on or before December 31, 1919.

In awarding these prizes, preference will be given to dissertations which exhibit original work, but if no dissertation is considered worthy of a prize, the award may be withheld.

Each dissertation must bear, in place of the author's name, some sentence or device, and must be accompanied by a sealed packet, bearing the same sentence or device, and containing the author's name and residence within.

Any clew by which the authorship of a dissertation is made known to the Committee will debar such dissertation from competition.

Dissertations must be printed or typewritten, and their pages must be bound in book form.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, with the sealed packet unopened, if called for within *one year* after they have been received.

By an order adopted in 1826, the Secretary was directed to publish annually the following votes:

1. That the Board does not consider itself as approving the doctrines contained in any of the dissertations to which premiums may be adjudged.
2. That, in case of publication of a successful dissertation, the author be considered as bound to print the above vote in connection therewith.

The Boylston Medical Committee is appointed by the President and Fellows of Harvard College, and consists of the following physicians: WILLIAM F. WHITNEY, M. D., *Chairman*; HAROLD C. ERNST, *Secretary*; WILLIAM T. PORTER, M. D., EDWARD H. NICHOLS, M. D., REID HUNT, M. D., HENRY A. CHRISTIAN, M. D., JOHN WARREN, M. D.

The address of the *Secretary* of the Boylston Medical Committee is HAROLD C. ERNST, M. D., Harvard Medical School Boston, Mass.

OUR OWN DESTITUTE

During the war, the American people gave unsparingly and cheerfully of their time, labor and money for the people of stricken Europe.

Drive after drive was successfully carried through. Charitable institutions here at home suffered to a vast extent in consequence. How much they suffered is being made the subject of comment by many great writers and thinkers, who urge that American institutions be given an inning now. During the war, money went abroad, prices at home increased to unheard of heights, and calls from the needy increased by over 30 per cent. Our own institutions were harassed and handicapped and burdened with debt. The Christian Home Orphanage at Council Bluffs, Iowa, which has a daily average of 250 inmates to pro-

vide for, is undertaking a Thanksgiving drive to enable it to continue its great work for orphan and destitute children. If you feel that something should now be done for American institutions, send a Thanksgiving offering to this worthy orphanage.

HAS LABOR ANY FRIENDS?

Food rots by the ton on the deserted docks of New York, while in the great city prices soar and thousands face starvation. At the very time when a maximum of wise production and a minimum of wastage are imperative, capital and labor take up arms in a bloody struggle. And, for once, at least, capital is not wholly in the wrong.

The public has dealt patiently, frequently to the relinquishment of its own rights, with the labor organization. Because of the undoubted wrongs that the worker has too often suffered, publicists have inclined to overlook the occasional excesses of the trade unions, and to hope for better things. But of late, labor appears to welcome each new leader bearing a firebrand, with a welcome warmer than that given his predecessor. In the pursuit of its rights, labor has forgotten that the public, and even the capitalist, has rights equally valid. It now seems to look upon itself as a privileged class; what it once denounced as the root sin of the capitalist, it now takes to itself as a virtue. And if the law of the land stands in the way of further progress, so much the worse, say the extremists, for the law of the land.

What organized labor needs most just at present is candid criticism. What it needs least are some of its present "leaders," who propose the theory that 107,000,000 Americans must bow to the will of the 3,000,000, who are affiliated with the American Federation of Labor. It is easy enough to denounce the Government before a cheering crowd of Reds, who lead labor about by the nose, but not quite so pleasant to languish in jail, while the wife and children starve. If the labor leaders have not gone utterly mad, they will write down respect for the law and unflinching reverence for all legitimate authority, as the first requisites in every organization for the toiler. No man ever got anywhere in this country, except in jail or a felon's grave, by organized opposition to the law of the land, in defense of his "rights." Has labor any friends? Let them speak, at once, and in no uncertain tone.—*America*, Nov. 1, 1919.

Public Health

CONFERENCE OF TRUSTEES AND OFFICERS OF PUBLIC TUBERCULOSIS SANATORIA.

The first of a series of conferences between the State Department of Public Health and the officers and trustees of the public tuberculosis sanatoria of the State was held at Springfield on November 18 and was attended by the officers of practically all of

the forty county institutions for which provision has been made within the past three years. Dr. C. St. Clair Drake, Director of Public Health, presided and, in his opening address he expressed the sentiment, often repeated during the conference, that the great success in Illinois in making provision for adequate public sanatoria might end in failure through unwise or unguided action of the sanatorium trustees in erecting their institutions and particularly in the selection of their medical personnel. Accent was laid upon the fact that, in Illinois, the county sanatorium is in no sense a charitable or philanthropic institution and that it is the spirit of the law that it shall be entirely separated from the county almshouse in every possible way and it was recommended that the medical service of the sanatorium be in no way connected with the medical service of the almshouse or with other pauper medical relief.

The principal speakers were Dr. George Thomas Palmer, president of the Illinois Tuberculosis Association and chief of the Division of Tuberculosis of the State Department of Public Health; Paul Hansen, chief of the Division of Sanitation; Miss Ann L. Tillinghast, former superintendent of the Edward Sanatorium and of the Springfield Open Air Colony, and Dr. J. W. Pettit, of Ottawa.

REVISED RULES FOR THE CONTROL OF COMMUNICABLE DISEASES.

The revised rules of the State Department of Public Health which will be *effective on and after January 1, 1920*, contain a number of important changes which will render the Illinois rules in keeping with the best epidemiologic practice. Under these revised rules, no patient suffering from diphtheria can be released from quarantine until after two negative nose and throat cultures. Formerly, particularly in the rural sections, those patients from whom cultures were not taken were released after a quarantine period of three weeks.

In cases of scarlet fever the rules are so amended that quarantine will terminate four weeks from date of onset provided all discharges have ceased. In both scarlet fever and diphtheria, modified quarantine may be permitted in cities or public health districts *employing full time medical health officers and maintaining an otherwise efficient public health service*, under the following conditions:

(a) The medical health officer of such city or public health district shall make application for and receive authority to take advantage of these provisions from the State Department of Public Health.

(b) When modified quarantine obtains, the patient and necessary attendant shall be confined to one or more rooms, from which all other members of the household shall be excluded, having an outside entrance separate from the outside entrance to the remainder of the house. These rooms shall be locked off and effectually sealed with adhesive strips about all cracks and doors and other possible entrances

against passage to or from the non-quarantined section.

(c) The medical health officer or his authorized agent shall inspect such premises at least three times weekly to examine the seals and to ascertain whether or not the rules are being observed.

(d) The householder shall sign an agreement that he or she will be personally responsible for the observance of these rules and the instructions of the medical health officer.

(e) The wage earner only shall be permitted to enter and leave the non-quarantined portion of the premises. Such wage earner shall not be engaged as a teacher or janitor of a school or in any other occupation bringing him in contact with numerous children or in the production or handling of milk or other foods or food products.

(f) The local health authority shall be responsible to the Illinois State Department of Public Health for the proper observance of the restrictions of modified quarantine and, in case of violation of these rules in any particular, shall immediately institute absolute quarantine as provided in the preceding rule, and institute necessary measures for the prosecution of the responsible person.

In cases of typhoid or para-typhoid fever, there must be complete isolation of the patient from other members of the household until two fecal specimens have been reported negative by the laboratories of the State Department of Health, these specimens being submitted one week apart.

In German measles, the quarantine is specified as eight days from the date of onset. In measles, the quarantine must last until five days after the disappearance of the rash and thereafter until cough, catarrhal symptoms and abnormal mucous membrane secretions have ceased and the temperature has been normal for a period of forty-eight hours. In influenza, quarantine must be maintained until recovery and until the temperature has been normal for five days. In pneumonia, quarantine must be maintained until recovery and there must be no contact on the part of members of the family until the disease is fully terminated. In whooping cough, quarantine is to be maintained for eight weeks from the time the child begins to cough or until one week after all paroxysms of coughing have disappeared.

COMMUNICABLE DISEASES.

The Division of Communicable Diseases of the State Department of Public Health reports that an epidemic with 125 known cases of diphtheria recently developed at Salem, Marion County, the wide spread of the disease being due to the fact that the first cases were diagnosed as tonsillitis.

That smallpox now prevails in many sections of the State. Serious epidemics of the disease have been found at Monmouth, Warren County; Whitehall, Hillview and Roodhouse, Greene County and in Crook Township, Hamilton County. Smallpox is said to be

found in practically every township in Edgar County.

During the past few months, six cases of epidemic meningitis have been reported in Santa Fe and Looking Glass Townships, Clinton County. Fifty cases of typhoid fever have been reported in the city of Joliet and in Joliet Township, Will County.

INFLUENZA-PNEUMONIA VACCINATION IN STATE INSTITUTIONS.

In a number of the State institutions, the inmates are being vaccinated for protection from influenza and pneumonia and to determine the efficiency of the vaccine approved by the Commission on Respiratory Diseases made up of Professor Milton J. Rosenau, of Harvard University Medical School; Dr. William H. Park, director of laboratories of the Health Department of the City of New York; Dr. George Walter McCoy, of the United States Hygienic Laboratories, Washington, and Professor E. O. Jordan, director of the Department of Bacteriology of the University of Chicago. The use of this vaccine is not made compulsory upon the inmates.

ANNUAL MEETING OF THE ILLINOIS TUBERCULOSIS ASSOCIATION.

At the tenth annual meeting of the Illinois Tuberculosis Association, held at Springfield on November 19, a resolution was unanimously adopted recommending the inspection and scoring of all public and private sanatoria for the treatment of tuberculosis by the State Department of Public Health. It was also recommended that some plan of scoring similar to the score card method of dealing with dairies be adopted; that the results of the first inspection be not made public but be transmitted to the management of the institution for the purpose of demonstrating in what particulars the institution falls below standard.

The Association recommended that the standards of sanatorium management of the National Sanatorium Association and of the National Tuberculosis Association be adopted in Illinois. These standards lay great stress upon the medical and nursing facilities of the institution rather than upon details of location and buildings. In fact, of 100 points in scoring, only 3 points are allowed for location and site; 5 points for buildings and equipment and over 70 points for the character of medical and nursing supervision.

STEPS TO ENFORCE REPORTING OF BIRTHS.

On account of the obvious incompleteness in reports of births in several sections of the State, the Division of Vital Statistics of the State Department of Public Health is now checking up delinquencies through special agents and extended correspondence. In many instances it has been necessary to send final notices to negligent physicians and midwives notifying them that further failure to report births will cause all cases to be referred to the Attorney General for legal enforcement of the provisions of the Statutes.

INCREASED INTEREST IN TUBERCULOSIS AND VENEREAL DISEASES.

The satisfactory results of the promulgation of rules and regulations for the control of venereal diseases and of tuberculosis, requiring the reporting of all cases coming to the knowledge of physicians, attendants and other persons, are clearly manifested in the activities of the Division of Communicable Diseases and the Division of Diagnostic Laboratories of the State Department of Public Health.

POLLUTED WATER SUPPLY IN JOLIET.

A striking instance of the danger of using water from shallow wells has come to the attention of the State Department of Public Health in Joliet where a large part of the foreign population persists in using water from shallow dug wells, surrounded by privies. These wells obtain their supply from limestone through the crevices of which pollution may travel for great distances.

It has long been known that these wells have been polluted, but only within the past year have they become infected with the specific germs of typhoid fever. To date there have developed approximately fifty cases of typhoid fever, all attributable to drinking polluted water or to secondary infection from those who have used the polluted water.

Another lesson which has again been emphasized by this epidemic is that individuals cannot be depended upon to protect themselves. Even when informed of the danger of drinking the polluted water, they persist in doing so, thereby jeopardizing their own health and the health of others. In situations such as this there is no alternative but for the local health department to deal with a firm hand.

In Joliet the public water supply is of good quality and there is no reason why it should not be used in the present instance except the desire to save a few dollars.

Correspondence

THE INDUSTRIAL INSURANCE PARASITE AGAIN.

"To Overcome This Low Fee, the Doctor Should Make the Patient Unnecessary Calls to Overcome the Deficit."

The following letter speaks for itself:

Oak Park, Ill., Nov. 22, 1919.

To the Editor: I was very much interested in your article relative to Insurance Companies and their methods, in the September issue of the JOURNAL.

My experience with the insurance companies and their medical representatives has been far from satisfactory, and the ideas of professional

ethics that the insurance company doctors have demonstrated in the cases in which I have been concerned have been revelations to me and most unpleasant ones.

Here is a typical instance—I was called to attend a man, who had been run into by a taxicab, while riding on his bicycle. The man's wife and his employer both asked me to take charge of the case. The man was unconscious at the time, having suffered a severe basilar fracture. A few days later, a party who claimed to be the doctor from the insurance company, telephoned the hospital and stated to the nurse that I had been discharged from the case and that he was now in attendance. He asked the nurse questions as to the man's condition, etc. She refused any information referring him to me. At the request of the patient's employer, I met this doctor at the office of the employer and asked him to go to the hospital and examine both the patient and some x-rays that had been made. He refused absolutely, and informed me that since the patient was in his hands he would see him alone and follow his own methods. He was totally lacking in every-day courtesy, not to mention his entire disregard of the ethics of our profession. Deeming it time that radical measures be taken to combat such methods, I filed charges with the Ethical Relations Committee of the Chicago Medical Society.

This case was also brought up before the Oak Park Physicians' Club, and a resolution was passed to bring this matter before our local commercial association, for definite action, with the result that a conference was held with representatives of the Physicians' Club and the Commercial Association, to determine whether the local physicians should even take an emergency case, unless they could carry it through without interference or hindrance from a physician, who might be incapable and inexperienced, and whose services, on account of contract work, are far below the fees recognized by the medical profession.

It was agreed at this meeting that the local business men and the local doctors would cooperate and that in case of a disputed bill, a committee consisting of a representative of the Physicians' Club, the Insurance Company and the Commercial Association act as a board of arbitration. Notice of all this procedure was to be sent to the insurance companies, with whom the

local business men are concerned. What their action will be upon receiving this communication, we do not know.

In a recent conversation with an insurance doctor, I was told that a fee of only \$1.00 would be paid for a dressing, which is only one-half the charge of an ordinary office call in private practice. *To overcome this low fee we should make the patient unnecessary calls to cover the deficit.* This is evading the issue as to fees, and in my opinion, is not the way to do business. A fair bill sent to the insurance company in the same manner as to a private individual is the only method to pursue.

It is time that the insurance companies take a reasonable attitude and co-operate with the physicians and correct their present unethical methods so they will be consistent with the ideals and standards of the best men in the medical profession.

I am glad that you are interested in this subject and are bringing it to the attention of the readers of the *MEDICAL JOURNAL*.

Yours sincerely,

JOHN W. TOPE.

Note:—As we said in our September issue, it is time that the medical profession take drastic action to rid the community of these parasites. Nearly every physician in Chicago is protesting vigorously against the nefarious activities of the industrial insurance companies. The Editor has attended several medical meetings recently and protestation against insurance companies' present-day methods was the subject of general comment. Certain it is that the belief is growing rapidly that, if the unscrupulous tactics that seem to be the present favorite pastime of the private companies are not curtailed, the doctors are going to look upon the adoption of health insurance with a great deal more favor than they have been inclined to do in the past. Probably it would prove the lesser of two evils. We say again that "A word to the wise should be sufficient."

COMPULSORY HEALTH INSURANCE.

New York, Nov. 22, 1919.

To the Editor: I am sending you enclosed copy of the report on compulsory health insurance of the special committee appointed at the regular annual meeting in May, 1919, to study the subject and to report at a special meeting in the fall.

This report was adopted today at the special meeting held at the Hotel Ten Eyck, Albany. I shall be glad if you will give all the publicity you can in the weekly publication of your Medical Society and in all the other medical journals which you can induce to print it, or at least a very full abstract of it.

Very sincerely yours,

EDEN V. DELPHEY, M. D.

NEW YORK STATE MEDICAL SOCIETY'S SPECIAL INVESTIGATING COMMITTEE'S REPORT ON COMPULSORY HEALTH INSURANCE

Saturday, November 22, 1919.

At a meeting of the House of Delegates of the Medical Society of the State of New York, held in Syracuse, May 5, 1919, in compliance with the recommendations of President Halsted,

"That before taking final action, the subject of Compulsory Health Insurance be referred by this Body to a committee to study it with special Reference to its Relationship to the Medical Profession, and to report back to a special meeting of the House of Delegates to be called in the Fall before the next meeting of the Legislature," the following resolution was passed by the House of Delegates:

"In regard to that portion of the President's report having to do with the Donohue-Davenport Bill, we approve and advise the adoption of the recommendation made in supplementary report to the end that there be appointed a special committee named by the President to study the subject and report back to a special meeting of the House of Delegates, to be called this autumn before the next meeting of the Legislature."

The following is the Committee appointed by President Thomas H. Halsted:

Harvey R. Gaylord, Chairman, Buffalo.

Grant C. Madill, Incoming President, Ogdensburg.

Thomas H. Halsted, Retiring President, Syracuse.

Joseph B. Hulett, President, First District Branch, Middletown.

Frederick C. Holden, President, Second District Branch, Brooklyn.

Luther Emerick, President, Third District Branch, Saugerties.

Thomas A. Rogers, President, Fourth District Branch, Plattsburg.

G. Massillon Lewis, President, Fifth District Branch, Vernon.

R. Paul Higgins, President, Sixth District Branch, Cortland.

John H. Pratt, President, Seventh District Branch, Manchester.

Albert T. Lytle, President, Eighth District Branch, Buffalo.

J. Richard Kevin, Chairman, Committee on Legislation, Brooklyn.

Henry L. Winter, Chairman, Committee on Medical Economics, Cornwall.

Arthur W. Booth, Member, State Board of Medical Examiners, Elmira.

George W. Kosmak, Chairman, Committee on Legislation, Medical Society, County of New York, New York.

John A. Lee, Chairman, Committee on Legislation, Medical Society, County of Kings, Brooklyn.

James F. Rooney, Chairman, Committee on Legislation, Medical Society, County of Albany, Albany.

Walter H. Kidder, Secretary, Medical Society, County of Oswego, Oswego.

The incoming President, Grant C. Madill, added to the Committee Sigismund S. Goldwater, Medical Director, Mt. Sinai Hospital, New York.

Your Committee met at Atlantic City on June 10, 11 and 12; at Brooklyn on July 26; at Buffalo on September 3, and at Utica on November 9; and numerous meetings of sub-committees were also held. The members of the Committee have given good attendance, although two members have not attended any meeting.

Your Committee would like to offer the following brief resume of the subject of its study before stating its recommendations:

The essential components of all compulsory health insurance schemes are two: first, the provision of a cash indemnity during a relatively brief period of incapacity to labor due to illness; secondly, the provision to the insured and their dependents during a determinate time of so-called medical benefits which comprise medical, dental and nursing attendance, hospital and sanatorium accommodations, maternity attendance, drugs and all necessary medical and surgical supplies.

The proponents of this legislation rest their demand for the institution of this scheme in America upon two main allegations: first, that a very large amount of poverty is due to illness causing consequent unemployment and loss of income; secondly, that a vast amount of the population receives inadequate and insufficient medical attendance, that is, that medical attendance is grossly deficient both as to quantity and quality.

With the general features of the measures proposed for the legislative enactment of the compulsory health insurance scheme in this State your Committee will deal only in the briefest manner; the matter is familiar to you. It is proposed to establish an administrative machinery radiating downward from a division of the State Industrial Commission composed of a certain number of commissioners appointed by the Governor who in turn appoint a chief of the bureau of health insurance. Subordinate to the Commission and acting under regulations made

by the Commission function the boards of directors of the local funds composed of three members elected by the employer members of the local fund, three elected by the employees and one additional elected by these six. All the affairs of the funds are administered locally by these boards of directors. Each local fund employs a medical officer who is permitted to practice and who is practically the medical supervisor of the administration of the benefits of the act. The medical profession is not represented upon any executive body under the proposed law, but is permitted to function solely through advisory committees, local and state. Its sole statutory representative has an administrative, not an executive function.

After consideration of the evidence put forward by the proponents of this legislation in support of their statement that a large proportion of the poor have been impoverished through unemployment caused by illness, your Committee finds that none of this evidence is unimpeachable and that it rests upon largely *a priori* reasoning. The preponderance of evidence is against the fact that any considerable amount of impoverishment is caused by illness, moreover in those cases where impoverishment is caused by illness, it is due to the long enduring disability preceding death occurring in the chronic diseases especially tuberculosis, chronic heart disease, cancer, chronic joint infections, renal and vascular disease which cause a disability long exceeding the period of twenty-six weeks during which the insured is entitled to benefits under the scheme. The statistics of the Labor Bureau of New York State show that in the main disability from all causes including accident, injury and illness is the source of, on the average, only 5.7% of unemployment, about the same amount as that caused by weather conditions (5.6%) or a little less than half that caused by labor disputes (10.6%), or one-thirteenth that due to lack of work (74.6%). A survey entitled "Poverty in Baltimore and Its Causes; Study of Social Statistics in the City of Baltimore," by the Alliance of Charitable and Social Agencies, McCoy Hall, Baltimore, Md., November 15, 1918, gives strong evidence of the small part illness plays in the cause of poverty; moreover, it evidences strikingly the fact heretofore stated as to the relationship of prolonged disability not covered in any scheme for health insurance to the relatively few cases of impoverishment due to sickness. Your committee would find, therefore, that short illnesses causing ephemeral disability bear no relation to poverty; that where impoverishment is caused by illness it is in all instances due to long-continued disability; and that illness is but a very minor cause of unemployment as compared even to the conditions of the weather or labor disputes.

Your Committee is unable to find any available evidence that will bear inspection proving that, in the main, medical attendance in this state is grossly deficient in quantity or grossly defective in quality. If these facts were true it is unable to satisfy itself

that the people of this state would receive a larger and closer degree of medical attention where one physician may care for either two thousand or more patients as permitted under this scheme than they now receive where the proportion of physicians to population is about as one is to seven hundred and eighty. Moreover, your Committee is satisfied that the quality of medical attention would no more be benefited in the United States than it has in Germany, Austria and Great Britain, by the conversion of medical practice from its present plan into an enormous scheme wherein the practitioner would be employed from year to year under contract, and in the final analysis subject to lay dictation as to means and methods of practice.

Your Committee feels very strongly that the inquisitorial powers which would be conferred upon the State Industrial Commission and its agents, and upon the local boards of directors must be considered in its effect upon the public health, and especially as to the role it might assume in submerging and nullifying the activities of the present State Department of Health which has played so large a part in the reduction of morbidity and mortality by means of preventive, not palliative, medicine.

There is no uncertainty about the evidence that the relative morbidity rate, mortality rate, infant mortality rate and maternal mortality rate, has been much more materially reduced in the United States during the past twenty years than it has been in Germany and Austria where compulsory health insurance not alone, but the whole scheme including invalidity and unemployment insurance and old age pensions, have been in force. It can, therefore, be seen that compulsory health insurance as such plays a very small part in the reduction of length and severity of illness and that on the whole it has been of extremely little value, medically, in those countries; while it has been the cause of a profound deterioration in medical service and medical morale. Even in England where it has been in operation for a comparatively short time it has proven so defective and ineffective for the purposes for which it was instituted that it is now proposed to inaugurate the plan of state medicine to supplant it.

Your Committee, therefore, finds:

First: There is no necessity for the institution of a scheme covering the major portion of the population of the State providing for the institution of contract medical practice on a colossal scale in order to furnish medical attendance and other services.

Second: In those countries where this scheme has been in operation for many years, it has caused a deterioration in medical morale and medical service and that its effect in this State would be the same, that is, a lessening in the quality of medical service.

Third: In comparison with those countries where this scheme has been in operation the United States shows a more marked reduction in mortality rate,

both general and as affecting maternal and infantile mortality rate. Apparently the morbidity rate under the scheme has doubled instead of being diminished in Germany and Austria since the institution of the social insurance plan.

Fourth: There is danger of the scheme gradually undermining the functions so extremely valuable to the community at present subserved by the State Department of Health.

Fifth: Owing to the paucity of accurate and unimpeachable data collected by means of an unbiased investigation, your Committee recommends that the Legislature of 1920 be requested to appropriate a sufficient sum of money for the use of the Health Department, and such other departments in association with it, as it requires, for the purpose of making a survey of the State of New York to determine the amount and character of illness in its economical relation to the commonwealth.

Sixth: If additional legislation is to be enacted, it should provide for a greater development of existing agencies for preventive medicine, together with the extension on a large scale of the present county and municipal functions for both preventive and remedial medicine, and it should make further provision for the inauguration of more widely extended utilization of the present institutional clinical facilities for the diagnosis and treatment of disease, in order to facilitate the access of the entire population of the State to modern methods in the practice of medicine.

Your committee, therefore, recommends that the House of Delegates, and, through them, the Medical Society of the State of New York, unqualifiedly oppose the enactment by the Legislature of the State of New York of any law instituting a system of compulsory insurance against sickness because of its menace to the public health of the State.

This report, acquiesced in by a majority of the whole Committee, is the result of a meeting held in Utica, New York, November 9, 1919, at which time twelve members of the Committee were present.

ALBERT T. LYTLE,
Secretary for the Committee.

Adapted Nov. 22, 1919.

EDWARD LIVINGSTON HUNT,
Acting Secretary.

Investors' Department

INVESTMENTS.

A review of market quotations covering a period of years reveals the fact that the trend of prices moves in cycles. Industrial, political or legislative causes usually account for this phenomenon, although the present situation is admittedly traceable to readjustment problems growing out of the war. Intrinsic values in gilt-

edge securities probably never were at such low levels as at the present time. It is generally agreed that increased cost of material and labor is responsible for the major part of our economic problems, and the most difficult of solution, as it affects the welfare of our people in all vocations of life and naturally involves conflicting interests. It is a situation calling for sanity, patience and unprejudiced thinking, particularly by our representatives in Congress; but to the individual who believes in our ability to solve and surmount these questions as we have in the past, and who has confidence in our wonderful industrial efficiency to take advantage of a world demand for food and manufactured goods, the present low price of bonds and first preferred stocks of strong companies offers a very exceptional opportunity because of the ultimate prosperity which these companies will enjoy.

As a comparative illustration of market prices, it is interesting to note that railroad bonds legal for investment by savings banks in the State of New York are now selling at the lowest prices in their history, and what is true of railroad bonds is likewise true of practically every class of bonds, government, industrial, public utility, and municipal.

Individual opinions may differ as to the desirability of classes of bonds suitable for investment, but none can question the real opportunities presented in a wide variety of securities at current low prices. To the man who buys for income purposes, who buys because his better judgment tells him that today he can get a higher yield for a term of years than he can hope to secure by waiting, the present situation offers the opportunity. A careful study of current offerings would undoubtedly be time well spent.

Subscribers to the JOURNAL are reminded that our Investors Department recently established is a clearing house for any information which may be desired regarding their holdings of investments or contemplated purchases. It is a matter of keen disappointment that so little interest has been manifested in a gratuitous service inaugurated purely for the benefit of subscribers, which requires expert knowledge and a wide fund of information. All classes of investments are today affected by unusual conditions, and to assume that it is not necessary to keep in close touch with corporate affairs is to neglect one's own interests.

FINANCIAL EDITOR.

Society Proceedings

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, Nov. 5, 1919

1. Mental SanitationGeo. F. Butler
Discussion.....Julius Grinker
2. The Problem of the Tuberculous Pregnant
WomanC. Henry Davis
3. Pneumoperitoneum in X-Ray Work.....
.....Benj. H. Orndoff
Discussion.....I. S. Trostler
4. The Cystic Dilatation of the Ureter with Re-
port of a Case Successfully Operated
UponF. Kreissl and Wm. H. Gehl

1. Diagnosis of Ectopic Pregnancy (From Cook County Hospital) Henry F. Lewis
Discussion..... } Carey Culbertson
 } Jos. L. Baer
2. Lateral Ventricle Injections in the Treatment of Tabetic Optic Atrophy.. Geo. F. Sukei
3. Midwife Practice—An Anachronism..... Rudolph W. Holmes

1. The Diagnosis of Chronic Cholecystitis Complicating Cardiac Lesions...Robert H. Babcock
DiscussionBayard Holmes
2. The Undernourished and Malnourished Child
.....Wm. R. P. Emerson, Boston, Mass.

Meeting of March 17, 1919—Continued

SCHNEIDER LENTICULAR LENS FOR HIGH MYOPIA

Dr. Carl O. Schneider stated that when prescribing concave lenses of about ten diopters or more, we were well aware of the excessive weight and thickness, and of the conspicuous rings or reflections of the edge, that were present in concave lenses of the ordinary form.

To overcome these objections, the old well known lenticular lens, consisting of a plano or perfectly flat piece of glass with the concavity ground in the center, had long been in use. This form of lens gained only a slight reduction in weight and thickness, and it had the disadvantage of only a small concave area, and this area could be increased in size, only at the expense of the objectionable added weight and thickness.

It occurred to him sixteen years ago, while studying physical optics, and making diagrams of the course of a ray of light through various forms of lenses, that the combination of a concavity in the center of a convex piece of glass, seemed to produce a lens suitable for the correction of a high degree of myopia, that

would contain a much smaller amount of glass, and at the same time admitted of a larger concave area, than did the ordinary lenticular, or any other form of concave lens then available.

Upon inquiry, he found that no lenses of this type had been made, and certainly none like it were in use before the time he applied for the patent which covered the subject of this paper.

He quoted from specifications on Patent No. 744,982 that was issued to him November 24, 1903, as follows: "The present invention consists in forming a concave lens by grinding a central concavity of the desired curvature in a main body portion of the required dimensions, and which body portion is of a double-convex, a plano-convex, or a compound-convex form. As so formed a concave lens for spectacles and like uses is produced containing a much less quantity of glass for a concave lens of a given focus and size than it had been possible to produce heretofore. The present invention also renders it possible to grind a concave lens with thin edges, and thus entirely eliminate the numerous objectionable and annoying reflections or rings which appear in a concave lens of the ordinary form. In addition to the foregoing, the present invention affords a lens of a neat and pleasing appearance, and its thinness at the margin permits of a very ready, neat, and substantial attachment to the spectacle rim or to the straps of a rimless mounting."

possible for us to prescribe for a patient having a high degree of myopia.

In the author's experience, myopes of ten diopters or over would gain sufficient advantage by reduction in weight and pleasing appearance, to warrant the use of some form of this lens; but it was particularly in cases requiring a correction of about 20.00 D. or more, that the patient was considerably benefited and invariably delighted with this new form of lenticular lens.

The general adoption and increasing popularity of these lenses, together with the fact that ten years after the patent was granted, and up to the present time, several optical houses were unkind enough to claim the idea, and they named it their own lenticular lens—is the best evidence he had to offer that this little invention of his must have some merit.

There had been no selfish motive in obtaining this patent, his object was merely to put this on record at this time, in order to definitely establish the fact that he had made this slight contribution for the good of humanity. No restriction had ever been imposed against the free use by all, to make or enjoy the wearing of these lenses. No fee or royalty had ever been charged or collected under this patent, and he wished to make it perfectly clear that he was permitting all optical shops to make any of these lenticular lenses, without any financial obligation to him whatever.



Fig. 1

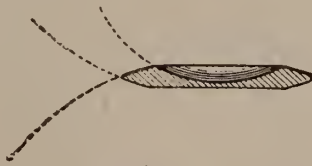


Fig. 2

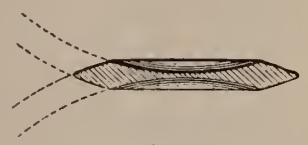


Fig. 3

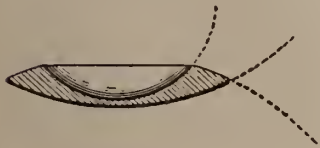


Fig. 4

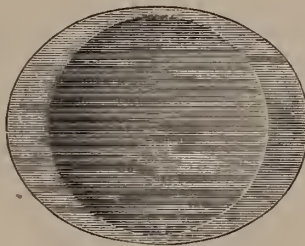


Fig. 5

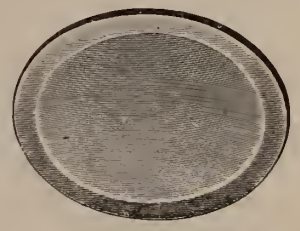


Fig. 6

Various modifications of this principle were covered at that time. Lenses as shown in Fig. 1 and Fig. 2 were adapted for the combination of a cylinder on one side with a concavity on the other. Lenses of the type shown in Fig. 3 are used when it is anticipated that the patient will prefer the double concave form, but Fig. 4 illustrates the most desirable shape in which to prescribe this lens.

With the aid of the toric lens surfacing machine, it was possible by applying this same principle, to produce the concave surface in an oval form, and we had in the Schneider oval lenticular lens, what was undoubtedly the most beautiful concave lens that it was

His contention is, that these various forms of lenticular lenses which he had originated, did possess some advantages over the older and better known varieties, and he hoped as a result of bringing this subject to our notice that thereafter more of our highly myopic patients would be wearing much lighter and neater appearing lenses.

DISCUSSION.

Dr. Michael Goldenburg said he had been familiar with the Schneider lenticular lens, but did not know that a member of the society or resident of Chicago was the inventor of it. He had been using this lens for a number of years; it was a beautiful thing and gave much finer and clearer vision than any lens on the market.

Dr. E. R. Crossley said he had prescribed this lenticular lens frequently but did not know that Dr. Schneider was the inventor of it.

Dr. Robert Von der Heyde stated that the paper presented by Dr. Schneider was timely, for owing to the present tendency toward larger lenses, the myope especially was very badly handicapped. He had been using these lenses for years, and also used the toric lenticular lens in which the bevel edge was toric instead of plus sphere. It gave an oval instead of a round field which made it a good looking lens. He did not know a member of the society was the inventor of the Schneider lens. There was one optical company which produced a similar lens by beveling the edges by hand on the grindstone. He thought it would be a good idea to make these thick lenses out of flint glass having a higher index of refraction. In this way we would get a thinner lens diopter for diopter than with the usual crown glass.

While the subject of lenses was up for discussion, he would like to mention a very great and seemingly unavoidable defect created by prescribing kryptok bifocals where one eye was quite different from the other in refraction in the vertical axis. When one, for instance, prescribed a lens for an individual that had minus two sphere for distance for one eye, and only minus one sphere in the other eye, a difference of a diopter, he was creating a hyperphoria. By instituting a prism in the lower segment that could not be avoided. In any individual, where there was a difference in the refraction of one eye as compared with the other in the vertical meridian, that difference would manifest itself in the reading segment by about as many degrees of prism as there were differences in diopters. One was artificially creating a hyperphoria which could not be avoided in kryptok lenses as made at present. (Here Dr. Von der Heydt illustrated this point by the aid of diagrams.)

Dr. N. C. Nelson said he knew of the Schneider lenticular lens about a year ago and had prescribed it for patients.

At the request of the president, Dr. Schneider explained how the lens was ground and described the mechanical methods that were used by opticians in producing it.

DISCUSSION OF CLINICAL CASES.

Dr. Smith asked Dr. Nelson why he did not treat the case of xeroderma pigmentosa with the x-ray.

Dr. Nelson replied that the case was sent to a leading skin specialist in Chicago in the first place, and he asked the specialist why he did not use the x-ray treatment, and his answer was that the disease was not favorably affected by the x-ray.

Dr. Von der Heydt asked for further information regarding the case of double paralysis of the external recti.

Dr. Crossley stated that the object in showing the case was to refer to the transplantation of the superior and inferior recti muscles. This operation was described by Dr. Woodruff two years ago before the American Medical Association, at which time he (Dr. Woodruff) reported two cases on which he had performed this operation. This was the fourth case. Advancements were done on both external recti before Dr. Woodruff had operated.

Dr. Noble asked whether there was any action of the external rectus of the eye, and if there was any pull at all.

Dr. Crossley replied that there was pull in both eyes. In the left eye there was a little deviation upwards, and Dr. Woodruff had attempted to correct that, but with what result he did not know.

Dr. Noble asked how long it was since the operation was done on the right eye.

Dr. Crossley replied about a month.

Dr. Noble asked how long it was since the left eye was operated on.

Dr. Crossley replied there was a week between operations. The first two cases were reported in the proceedings of the Ophthalmological Section of the American Medical Association for 1917, and in this paper Dr. Woodruff covered the subject of transplantation of tendons quite extensively elsewhere and in the eye. There were only a few such cases reported before that time.

Dr. Von der Heyde said that two years ago he saw a case similar to the one shown by Dr. Crossley of paralysis of both adductens nerves in the same individual. It could not be justified anatomically at all. It should not be called a paralysis of both external recti. The literature maintained that these cases were usually a convergence spasm, and that the origin of it was either some irritation in the brain, hysteria, or possibly multiple sclerosis.

Dr. Crossley stated that trauma was excluded in these three cases. He did not see how external trauma could paralyze both external recti, nor could he say anything about the origin of it any more than that the man was struck months ago and fell on the back of his head, and that was the beginning of his trouble. The man had already gone through the operation of advancement of both external recti sometime before, and had had no previous trouble.

Dr. Nelson said he went into the history of this case very carefully and could not ascertain that the man had had any previous trouble. He was on a drunk, got into a scrap, got the worst of it, and came to the clinic the next morning with both external recti paralyzed. He was unable to bring the eyes out beyond the mid-line. He could bring them in. At present, after operation, he had considerable motion in the right eye, but in the left it was not quite so marked. The last operation on the left eye was only done last Friday.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held on Monday evening, April 7, 1919. Dr. Elmer L. Kenyon in the chair.

PRESENTATION OF CASES

Dr. George W. Boot presented a boy, aged 12 years, who had a suppurating ear. The patient had been in the Cook County Hospital for treatment for measles. He was fat and pudgy and the fingers and toes were very short. He had the typical configuration of the female; no pubic or axillary hair, and Dr. Boot suspected a mild case of Froelich's syndrome. There was no enlargement of the sella turcica; the visual fields were narrowed. The patient passed 1560 c.c. of urine in 24 hours. No test for sugar tolerance had been made, but had been requested.

Case 2: The patient was a lieutenant in the Medical Department at Camp Custer who had a foreign body in the trachea. A dentist in working on the teeth used a broach which slipped and went down the trachea. It was located by means of an X-ray examination and it was very easily removed by means of a bronchoscopy, which was finished in ten minutes. (Radiograph was exhibited which showed the location of the foreign body in the right bronchus.)

DISCUSSION

Dr. J. HOLINGER said that all suppuration in the first case had ceased, but that about once a week there was a temperature of 102° which lasted for about a day and then went down to normal. There was still a question as to whether there was sinus trouble and that was being investigated.

Dr. Noah Schoolman presented his thesis entitled "Contribution to the Etiology of Peritonsillar Abscess: Dental Origin." (Abstract.)

The author stated that two years ago a number of cases came under his observation which strongly suggested that their origin had been in an infected wisdom tooth. They were either accompanied or preceded by

caries or inflammation due to delayed eruption and impaction of a wisdom tooth. The cases were also characterized by an excessive trismus, the patients being unable to separate their teeth. Attempts to force the jaws apart were frustrated by a muscular contraction. This picture was not usually presented by the typical cases of peritonsillar abscess. A series of 75 cases of peritonsillar abscess were collected but in few of them could a detailed history be secured. However, the following data were given: 59 cases were treated at the Illinois Charitable Eye and Ear Infirmary from 1915 to 1917, 48 males and 11 females. About 75 per cent of the cases occurred in the second and third decades of life, a period fairly coinciding with the third molar period. Of the 16 cases seen in private practice, 12 females and 4 males, all but one were between the ages of 15 and 30. Out of 16 cases 3 were unmistakably of dental origin; 5 other cases had carious wisdom teeth and gave a history of previous attacks of alveolar abscess. In over 50 per cent of the cases the dental etiology seemed to be a principal or a contributing factor. Many authors had found peritonsillar abscess more common than the tonsillar, and it had been pointed out that peritonsillar as well as tonsillar abscesses occasionally followed operative procedures on the nose, in spite of antiseptic precautions.

Recently an elaborate study by M. A. Gilbert appeared in a French Dental Journal in which the author differentiated between *peri* and *para* tonsillar abscess. The principal anatomical landmarks forming the basis of this distinction were the internal pterygoid muscle and its insertion in the ascending ramus of the mandible. A peritonsillar abscess, in his opinion, was located between the tonsil and the superior constrictor. It was of tonsillar origin and the superior pole of the tonsil, which contains the largest and most submerged crypts, was the most frequent source of infection. The paratonsillar abscess, on the other hand, he believed to be of wisdom tooth origin. The space delimited by the insertion of internal pterygoid and ascending ramus of the mandible was considered by this author to be in a state of enhanced susceptibility to infection, owing to a state of congestion and physiologic proliferation incident to delayed eruption, impaction and caries of the last molar, and sometimes of the second and first molar, observed in the white race. Such an abscess was situated between the ascending ramus of the lower maxilla and the internal pterygoid muscle. An abscess thus situated was in relation above with the parotid gland and temporo-maxillary articulation, which might be involved. It was also in relation with the dental and lingual nerves, and might extend by way of a cellular tract around the anterior border of the internal pterygoid, invade the cellular space between the latter muscle and the superior constrictor and thus reach the pre-styloid region. Very rarely the pus might burrow towards the mouth and pass through the tonsil, and it might also burrow over or under the mylohyoid muscle and provoke a phlegmon on the floor of the mouth or anterior

part of the neck, frequently leaving one or more fistulae which persist for a long time.

It was thus seen that this condition starting from a carious or impacted last molar and acting upon a region of physiological predisposition to infection resulted in a limited phlegmonous periostitis, which by reason of the peculiar relations might progressively involve the entire side of the neck and face, presenting a combination of many lesions, a peritonsillitis, parotitis, temporo-maxillary arthritis, and phlegmonous adenitis. From these conditions it was to be differentiated, according to Gilbert, by adducing a history of premonitory dental pain, followed by an interval of quiescence, then by the development of a peritosteal inflammation of the ascending ramus involving the bone and early giving rise to maxillo-pharyngo-glosso-dental pain, through the involvement of the dental and lingual nerves, to dysphagia and a marked trismus which could not be relaxed by chloroform. Later the pointing of the abscess above the last lower molar corroborated the dental origin.

DISCUSSION

Dr. ROBERT SONNENSCHNIG cited the case of a man of forty who had had trouble with his last lower molar, but despite the advice of the dentist the tooth was not extracted. The patient shortly afterward had sharp, severe pain, together with the trismus described by Dr. Schoolman, with fever and a swelling pointing to the angle of the jaw. As there were no teeth missing there was great difficulty in opening the mouth, but this was finally accomplished by means of long dressing forceps. An enormous amount of pus was evacuated and the abscess continued to drain for six or seven days, with eventual recovery.

Dr. NORVAL H. PIERCE thought Dr. Schoolman had presented an important subject which had been very little talked or written about. He recalled cases where it was very difficult to make a differential diagnosis between paratonsillar and peritonsillar abscess. These cases might cause very grave conditions, even threatening life, for they might be accompanied by profound sepsis. The subject of trismus was very interesting. They often found it in France accompanying slight wounds of the muscles of mastication, and the jaws would be so firmly locked that the man was fed with difficulty. X-ray examination would disclose a small bit of projectile lodged in the masseter, perhaps only as large as the lead on the sharpened end of a lead pencil. Some cases would relax somewhat under deep anesthesia, but not all. The nature of trismus was not at all understood and needed to be further investigated. Possibly an allergic factor was involved.

Dr. ROBERT GOOD said that some ten years ago he studied a few hundred tonsils with Dr. Orndoff and they found many mucous glands in the capsules and ducts leading from these glands to the epithelium and then through the stomata between the cells into the tonsil crypts. It was clear to him that a peritonsillar abscess might be caused by a cryptic infection passing through the stratified epithelium of the crypts into these mucous ducts, to the mucous glands, producing a pus infection in the latter which ruptures and breaks through the capsule of the tonsil, forming a peritonsillar abscess.

Dr. H. L. POLLOCK asked if Dr. Schoolman had ever seen any of these cases in tonsillectomized patients. He considered this an important etiological factor. They very often found bilateral peritonsillar abscesses which were known to be of tonsillar origin and had recently seen a case with intense trismus which was unquestionably of dental origin. In the latter case the trismus was so marked that it was impossible to make a satisfactory examination, but he knew an abscess was present by the temperature and swelling. After puncturing the abscess with a blunt forceps the trismus promptly dis-

appeared. He had found that these cases took much longer to heal than an ordinary tonsillar abscess.

DR. A. A. HAYDEN said that cases were frequently referred to him in which a difficult extraction had been performed, such as the removal of impacted molars, with the patient complaining of sore throat and inability to open the mouth without considerable pain. He had seen only one peritonsillar abscess among these cases but supposed that was of dental origin. He thought trismus was one of the earliest signs of peritonsillar abscess, and that it quickly disappeared when the abscess was located and the pus evacuated.

DR. HARRY KAHN cited a case seen recently where he found pronounced trismus, a temperature of 101° F., pulse 118 and the patient in a profuse sweat. There was a bulging area over the left tonsillar fossa and well up on the hard palate. An incision was made and pus spurted out under great pressure, but the trismus persisted for almost ten days before the mouth could be opened widely.

DR. ARTHUR M. CORWIN stated that he had seen a number of cases where the teeth had been extracted and a great disturbance was set up as a result of digging into the bone and the inflammation of the masseter muscle gave the picture so well described by Dr. Schoolman. They had also seen peritonsillar abscesses not of dental origin which had produced trismus. He wondered whether the differentiation should be drawn too sharply as between the two terms, "para" and "peritonsillar." He preferred the word "Paratonsillar" as it covered all sorts of conditions, whether localized to one small area or extended upward or downward, sometimes to the lower third, and pointing usually toward the front.

DR. J. HOLINGER agreed that the paper was timely. It drew attention to an etiological factor of peritonsillar abscess that possibly had been overlooked, but it was certainly not the exclusive etiology. For several years it had been his habit in peritonsillar abscess to advise general anesthesia and remove both tonsils and he often found that the tonsil was practically dissected by the abscess. The abscess spread in the capsule of the tonsil and the moment it was loosened from the anterior and posterior pillars it was comparatively easy to roll it out into the mouth and snare off the base. A patient who had been septic for days would be found free the next morning. This also excluded the formation of other abscesses, and was not so startling when one remembered how often unexpected abscesses were opened in simple tonsillectomy.

DR. A. M. CORWIN doubted if it would be considered good practice among surgeons and medical men and in this specialty, to take out the tonsils and open up such a large area to pus from the peritonsillar abscess.

DR. HOLINGER, answering Dr. Corwin's objection to his method, thought it was good surgical procedure wherever there was pus to open it up and thought it a good plan to follow in peritonsillar abscess.

Dr. Alfred Lewy read a paper entitled: "Operative Treatment of Chronic Suppurative Otitis Media." (Author's Abstract.)

"The cases are divided into urgent and non-urgent. In the urgent class we put intracranial complications, including labyrinth and lateral sinus cases, general sepsis and acute exacerbations in general. In these cases the question is between watchful waiting and immediate operation. Operation sooner or later is indicated, but a good diagnosis is prerequisite to the decision as to the best time to operate. Diagnosis depends upon history, general examination, with special reference to facial expression, tongue, skin, bodily condition; examination of blood, urine, musculature and viscera, followed by neurologic, including fundus, examination, and Barany tests were applicable, study of pulse and temperature curve, and finally spinal puncture with cell count, chemical and bacteriologic examination. Exploratory operation is justified for

unlocated pus in the cranial cavity and when other diagnostic measures have been exhausted. The diagnosis takes time, and time is valuable, but error is fatal, and the percentage of recovery is certainly greater with the man who has his facts in hand and who knows when and how to operate.

In labyrinth complications first determine if there is any hearing or response to static tests; during active symptoms absolute rest in quiet, dark room. In the event of endocranial complication immediate radical and labyrinth operation if labyrinth is dead. In acute suppurative labyrinthitis either course, immediate operation or expective treatment, is fraught with danger, but I believe the course herein advised is less dangerous. After acute symptoms subside radical operation, plus labyrinth operation if justified by tests and operative findings. A live labyrinth should not be operated. If active symptoms recent or present at time of operation the Neumann operation is preferred. In the case of a dead labyrinth that has been symptomless for a long time, the question of operation thereon can also be determined by the operative findings. When the disturbance is not violent and merely due to pus retention in the middle ear spaces immediate operation may be done.

In acute exacerbations of chronic suppuration I favor careful observation until acute symptoms subside as the safer procedure. Endocranial complication demands immediate operation. Also subperiosteal abscess requires operation, but the plastic must be postponed.

In the non-urgent cases the following factors are considered: (a) The probability of serious complications. (b) The amount of disability or discomfort caused. (c) The probability of cure by less radical measures. This includes economic conditions. (d) The effect on hearing, which may be worse but not better.

Most non-urgent cases are amenable to cure or good control by local treatment; all should have the benefit of a trial course of treatment.

Indications for operation are: Cholesteatoma; caries of temporal bone; fistula of mastoid or bony canal; strictures, recurrent granulation tissue; adherent remains of membrani tympani or malleus, especially when associated with marginal perforation; frequent headache, vertigo, general ill-health; persistently fetid suppuration resisting all treatment.

Probability of cure: 50 per cent or less have dry ears after operation. About 25 per cent are mucous membrane cases; in these operation is needless and generally useless; except perhaps closure of tube.

Selection of type of operation: Ossiculectomy if necrotic process is confined to ossicles or aditus and attic, providing hearing is less than one meter for the voice. It has the advantage of local anesthesia and no period of disability. Contraindicated by labyrinthine or endocranial complications, and not without danger to the facial nerve and labyrinth.

Modified radical: Heath's and Ballenger's modification preserve the annulus tympanicus, and require

elaborate after-treatment. Stacke, Bondy and Blackwell remove outer attic wall, but all aim to preserve the ossicular chain and remains of the membrani tympani. They take their place, but it is not well defined, except Stacke who says his operation is useful when the perforation is in Schrapnell's or posterior superior margin and is closed off from the eustachian tube. He claims it is useful even if the incus is destroyed. Some type of modified radical is indicated when the simple mastoidectomy will not suffice and hearing is still fair, especially in children; when both ears are to be operated the better one may be selected for this operation; in the epitympanic type Stacke's operation may be done, however, according to our own technic. For all other chronic suppurations which require operation the complete radical is done, having first tested the labyrinth and searched for evidence of endocranial involvement.

DISCUSSION

Dr. H. L. Pollock believed everyone realized the importance of the subject and that the time had changed from very radical procedure of a few years ago to more conservative treatment. By careful watching and waiting the patient had much better chances than by immediate operation. He thought it was contrary to all surgical procedure to preach opening such an abscess in an acute condition. Nature had walled them off and operation was likely to bring fatal results. The same held true with sinus thrombosis. He believed there was little question of interference where the diagnosis of extradural abscess and cerebellar abscess was made following the acute exacerbations; the main thing was to be sure of the diagnosis and then operate. The most important point was in the non-urgent cases. His rule was after careful examination to tell the patient with the fetid odor that there were three indications: First, prevention of the endocranial complications; second, the attempt to secure a cessation of the foul discharge, or change it from the foul to a non-odorous discharge, and, third, to conserve as much hearing as possible. Dr. Pollock thought not more than thirty-five to forty per cent would stop discharging, and the outlook as to the hearing was very little better. The cholesteatomatous cases very seldom got well.

Before operating a chronic, discharging ear everything in the way of cleaning up the pharynx and nasopharynx should be done. Where this had been done and the discharge persisted a modified operation should be attempted in a selected number of cases. Where the modified operation was successful hearing would improve. In cases where central or peripheral perforations of the drum occurred there was a chance by careful cleansing of the ear and vaccine treatment, treating the middle ear through the eustachian tube, flushing out the ear with antiseptics, using antiseptic powders, etc., to obtain marked improvement. If after eight weeks of conservative treatment the patient had not made much progress they resorted to radical operation. In a great many cases they had been able to stop the mucoid discharge following a radical operation by closing the pharyngeal end of the eustachian tube, but they had ceased trying to close the tympanic end of the eustachian tube.

Dr. Austin A. Hayden read a paper entitled "Hemophilic Type Hemorrhage—Treatment by Transfusion." (Abstract.)

The paper was presented to emphasize the usefulness of transfusion in the control of hemorrhage in patients whose clotting time is abnormally slow, and in whom the bleeding persists as a capillary oozing after all mechanical means for hemostasis have failed. Its scope was limited entirely to the treatment of hem-

ophiliacs, or to patients whose blood clotting period was abnormally long.

After reviewing the literature on the subject of hemophilia Dr. Hayden reported the case of a man aged 39 who, following a submucous resection (after Killian) which was confined almost entirely to the cartilage of the nose, and tonsillectomy, performed at 8:30 A. M., had persistent bleedings from the nose. A Bernay sponge was inserted into each nostril at the time of the operation and six hours afterward another sponge was placed on each side. Nine hours after the operation the bleeding was continuing at the rate of about twenty-five drops per minute, with some trickling back into the throat. The sponges were removed, the flaps separated and the septal cavity carefully suctioned and sponged in an effort to locate the bleeding point, but this was unsuccessful. In half a minute the cavity would fill up with blood which seemed to well up from all over. The Bernay sponges were reintroduced with strips of tannic acid gauze packed tightly against their outer sides.

At 8:30 P. M. the bleeding still continued at the same rate from the nose and mouth. Coagulation time by the glass pipette method was found to be fifty minutes; hemoglobin 80 per cent. At 9:30 P. M. 20 c.c. of normal horse serum was given deep in the muscles of the abdominal wall. At 11 P. M. the blood was still dripping from the nose at about the same rate and running back into the throat. At this time Dr. Henry W. Ablemann transfused 100 c.c. of blood from the arm of the patient's sister, who was mistaken for his sister-in-law. The bleeding seemed to decrease and the patient was returned to his bed after receiving one-quarter grain morphine.

Twenty-four hours after the operation the bleeding was just about the same. A second transfusion was made from his sister-in-law and five minutes later the bleeding had stopped completely. The coagulation period was then five minutes; hemoglobin 70 per cent. The patient felt well and asked for something to eat.

There was no history of previous bleeding, but a vague history was elicited of severe bleeding in an uncle on the maternal side. The sister's coagulation time was six minutes and the sister-in-law's eight minutes.

The author was fully aware that this case did not entirely meet the requirements laid down by Bullock and Fildes who maintain that *no single* hemorrhage however severe or inexplicable could properly constitute a diagnosis of true hemophilia. However, some interesting speculations arose:

1. Can the coagulation period of non-hemophilic blood be so long as to cause a hemorrhage such as this patient had? Is the hemophilic himself always a hemophilic, or will his blood at times clot normally or nearly so?

2. Are the tissue juices that favor coagulation more abundant in the throat than in the nose? This would explain the dry tonsil.

3. How lasting may the results of transfusion be?

Two months later this patient had an uneventful tooth extraction.

4. Enormous quantities of blood can be lost if the bleeding is slow. In this case probably more than four quarts of blood was lost in twenty-four hours by nose and mouth. At the end the hemoglobin was 70 per cent, the red cells 3,500,000.

5. Transfusion in such cases seems to be the logical and sure way of stopping the bleeding. Ablemann's technic reduces what was formerly a major operation to a very simple, bedside if necessary, procedure.

DISCUSSION

DR. H. W. ABELMANN said that his biologic test for blood incompatibility consisted in injecting diluted donors blood into the vein of the patient. The blood was diluted to reduce its toxicity, and to control any sharp reaction it was injected a few drops at a time and repeated every few seconds. If no reaction followed after a lapse of three to five minutes the blood was usable as far as its compatibility was concerned. He had had no serious mishaps in nearly 2,000 transfusions performed in the last three and one-half years. The donor's blood may contain the coagulating ability, but may not transmit that ability or be of any benefit in stopping the bleeding when injected into the vein of the patient, as demonstrated in Dr. Hayden's case. He had repeatedly observed this phenomenon in his transfusion work, and was convinced that the laboratory tests are not sufficiently reliable or efficient to be entirely depended upon when transfusing blood. The simplicity and practicability of his method of transfusion permitted of therapeutic and biologic tests which are easily carried out, and which he believed would prove of great value in blood transfusion work.

DR. G. W. BOOR presented a little instrument made of platinum wire bent into several loops. These were filled with the patient's blood. After waiting three minutes the first loop was dipped into water; if the blood all washed out of the loop the second loop was dipped into water. After waiting another minute, the third, and so on until a loop was found coagulated. If the blood did not coagulate inside of five minutes it was best to postpone operation.

DR. ROBERT SONNENSCHNIEB thought that very often the bleeding time was more important than the coagulation time. In some cases where the coagulation was very slow the bleeding stopped very promptly, and vice versa.

DR. CHARLES LONG said that according to some investigators the percentage of hemorrhages following tonsillectomy was greater in those persons whose coagulation time was normal than in those where it was abnormal; therefore, it would seem that the coagulation of the blood outside the body depended upon a different cause than the coagulation in the living blood vessels.

DR. ALFRED LEWY said he was in the habit of testing the patient's blood by means of something similar to Dr. Boor's appliance, but he had operated cases in which the coagulation test by that method showed clotting required twelve minutes, without bad results. In one case in which clotting required seventeen minutes he refused to operate.

DR. JOSEPH BECK stated that he attended a meeting of the British Medical Society three weeks previously, when the substance of four years' experience with the British Army was given and practically all the men agreed that a substitute for blood which effected improvement was to use a solution of gum. A gum that was soluble and not irritating when it entered the blood stream served far better than the transfusion of blood itself. It had been found very useful in overcoming the anemia following the bleeding.

DR. NORVAL H. PIERCE said that according to the most modern ideas the only reliable method was to take the blood directly from a vein, never allowing it to come in contact with the skin. The blood was placed in a test tube and as soon as the tube could be turned upside down without the clot coming out the coagulation was complete. The time for a clot to

form with this method was greatly prolonged over other methods. In any case when coagulation was retarded and operation on the throat or nose was necessary, the patient should receive pre-operative injection of serum and a course of calcium. He had had quite a good deal of experience with gum mixtures and the men in Vichy thought the gum was not nearly as good as blood, even in cases of shock.

DR. E. P. NORCROSS stated that he always had the coagulation time taken before performing a tonsillectomy. However, he put even more reliance upon the family history as to bleeding.

DR. J. HOLINGER reviewed the characteristics of hemophilia and stated that shortly before the war Prof. Sahli in Bern, and Fonia, an assistant of Kocher, did some very interesting work on this subject. Sahli considers certain enzymes responsible for the lack of coagulability of the blood, but undoubtedly also the blood vessels are abnormal. Fonia thinks that a fibronogen substance, a forerunner of fibrin, is in the blood and is brought to action by a substance contained in the blood platelets. It is set free by the destruction of the easily destroyed platelets. In hemophiliacs these platelets are scarce or entirely absent. To supply the ferment of the platelets he found the "coagulen," a substance sold in the open market, a styptic. Fonia insists that he can stop the bleeding of hemophiliacs, but others doubt it.

DR. JOHN A. CAVANAUGH stated that it was necessary always to test the blood of the individual whose blood was to be injected into the patient. In one case he had examined the blood of six persons and mixed it with the blood of the patient and found that it destroyed the corpuscles of the blood, so it could not be used. The seventh person came along and it was found that his blood could be used. He always made this test before performing a transfusion and considered it very important.

THE CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held at the Palmer House on Monday evening, May 5, 1919. The President, Dr. Elmer L. Kenyon, in the chair.

PRESENTATION OF CASES AND INSTRUMENTS

Dr. John A. Cavanaugh demonstrated an instrument for ligation of bleeding vessels following tonsillectomy. The instrument was similar to the artery forcep. On one arm, which is perforated, is a groove for the passage of a catgut suture. On the other arm is a needle which passes through the perforated arm and picks up the suture and buries it below the bleeding point. The instrument was passed around for inspection.

Dr. Noah Schoolman demonstrated a patient who had suffered a perforation of the cortex.

DISCUSSION

DR. NORVAL H. PIERCE asked where the perforation of the cortex took place.

DR. SCHOOLMAN replied that the perforation was about 1 cm. from another perforation on the posterior wall, measuring from the beginning of the ethmoid canal.

DR. PIERCE said that the point of perforation of the cortex in mastoid disease was important, inasmuch as perforation occurs in simple suppurative processes along blood vessels. These blood vessels perforate the cortex from the periosteum and anastomose with blood vessels coming from the antrum. If a perforation occurs outside of this domain one must think of some diseases other than the acute inflammatory processes; for instance, tuberculosis, cholesteatoma, etc., so it was always important to note just where perforation occurs. If it was along the path of the blood vessels in all probability it was a case of simple inflammation.

Dr. J. HOLINGER thought the interesting point about the case was that the boy had a complete loss of all the reflexes, and they all came back after the shell which was shown in the X-ray plate was trimmed. The vision was almost gone, but had returned to practically normal. There was absolutely no reflex to light before the operation; both pupils were slightly dilated and perfectly immobile.

Dr. J. Holinger demonstrated the following two cases:

Case 1: A woman of forty-eight who came to the Dispensary of the Cook County Hospital on account of headaches and a discharge from her nose. At the examination pus was found on the posterior end of the middle turbinals and in the nasopharynx. In the pharynx the whole region of the right posterior pillar showed a broad, flabby pulsation, extending about 1 cm. medial from the posterior pillar under the mucous membrane of the posterior wall of the pharynx from the base of the tongue to behind the soft palate. The margin of the pulsating area was sharply defined by a straight, perpendicular line. It was evidently a large blood vessel immediately under the mucous membrane, but what vessel? The internal carotid, being round, tightly filled and not flabby and flat would not answer this description, nor would the posterior pharyngeal. It was thought to be either an aneurysm of the posterior pharyngeal or an abnormal vein.

Case 2: The patient was a man aged twenty-two, who had been admitted to the Alexian Brothers Hospital four weeks previously, very ill. The left eye protruded widely out of its socket and he could only count fingers. He had headaches. The whole condition had developed within a week or ten days. Dr. Abel found the conjunctiva of the left eye red and swollen, the pupilla blurred. Dr. Heym (a neurologist) found all the reflexes absent. The mucous membrane of the nose was red and swollen and pus was found in small quantities in the middle meatus. X-ray examination showed the left frontal sinus slightly cloudy, and below it a large, flat ethmoidal cell extending over nearly the entire nasal wall and a part of the roof of the orbit. A narrow elongation came as far as the floor of the orbit. Through a Killian incision this cell was reached from the outside, the eye pressed downward and outward. All the tissues of the orbit were very hyperemic, but nowhere could large quantities of pus be found. The frontal sinus was opened and contained no pus; the lining was swollen. The cell was freely drained into the nose. The mucous membrane was very much swollen. The patient improved rapidly. There was still some swelling of the conjunctiva of the lower lid, but the exophthalmos had entirely disappeared and the vision was improved.

Dr. Robert Good presented two cases with extradural irritation, following which he presented a paper entitled "Extradural Irritation and Abscess." (Abstract.)

The author hoped to contribute something which would help in the early recognition of the symptoms of extradural irritation or abscess, so that by early exposure of the dura serious and fatal complications might be prevented.

He stated that the dura was extremely vascular, enveloping nearly all the large arteries and veins in the skull, and that the slightest interference with return circulation in the dura might cause capillary edema and produce marked symptoms. He also considered the dura to be a highly sensitive organ and very painful on manipulation, whereas the brain tissue itself could be handled without pain.

The etiology of extradural irritation he classified under mechanical and infective irritants, the symptoms depending upon the amount of pain the patient could endure from the mechanical irritation, the severity of the infection, the extent of the edema of the dura and the degree of intracranial pressure. The symptoms were described in detail and charts were shown which demonstrated the different points.

The Abderhalden sereological test for intracranial lesions, as carried out by Dr. J. W. Retinger of the Durand Memorial Hospital, was considered of great diagnostic value.

The speaker stated that extradural irritation, except when produced by syphilis, should be relieved by removing a plate of the skull over the area involved. In mastoiditis accompanied by symptoms of extradural irritation, he invariably exposes the lateral sinus and the dura over the mastoid antrum, sufficiently to enable him to make a thorough examination of the dura and sinus, which at the same time established ample drainage.

In sinusitis of the frontal, ethmoids or sphenoid he advocated a thorough intranasal operation, keeping the patient under close observation for a few days, taking the temperature, pulse and respiration every three hours. If the symptoms persist he does an external operation on the frontal sinus, removing the posterior wall as far as necessary to reach the abscess and expose the dura. The dura should never be opened in those cases, as going through in infected field would nearly always produce a meningitis.

DISCUSSION

Dr. C. C. ROGERS thought there was no subject of more interest than this one, and knew of no condition that produced more disastrous results when the cases were neglected. In extradural lesions it was only necessary to consider the outer layer of the dura mater, the true periosteum, which was not at all different from the periosteum of any other bone. The cases that were infected from the sinus to the dura mater he believed should be treated in the same way that they were treated by general surgeons if there was infection of the periosteum of any long bone. Where there was a suppurative periostitis, whether there was free pus present or not, the tension should be relieved. This stopped the stripping of the periosteum from the bone, the destruction of the bone, and the extension of the disease into the medullary canal. The only way this could be done was by lancing; and this was to be done in the same way as if one had to go through the tibia from the proximal side to the distal side. In these cases the periosteum should be drained by taking out a piece of the skull and leaving it out. There was no necessity for trying to replace the bone or do a transplantation. The dura mater was one of the most sensitive structures in the body and when that was irritated symptoms manifest themselves. It was important that these conditions should be recognized before the process reached the periosteum, the inner layer of the dura, or into the subdural space. He had seen at least fifteen cases

of neglected mastoid conditions and two or three sinus cases where the process had gone through the periosteum and formed abscesses in the temporal sphenoidal lobe. The fatalities in these cases were great. He felt that the specialists should educate the general physician to recognize these conditions in the early stages. It was not necessary to have a lot of pus to have all the symptoms that Dr. Good had pointed out, for the slightest increase in the cranial contents produced pain.

One out of every three or four cases of extradural abscess or brain abscess which he saw had had a lumbar puncture. This he considered of no value in an extradural abscess and thought there was no excuse for it. It did harm rather than good.

DR. GEORGE BOOT took issue with the speakers on four points: 1. The vascularity of the dura. He had exposed the dura many times and had not found it to be a vascular membrane, but quite the reverse. 2. Extradural infection always preceding sinus thrombosis. Sinus thrombosis frequently occurs without preceding symptoms of extradural irritation. 3. Some brain abscesses are too severe for operation. This he did not believe. He operated on three brain abscesses during the year preceding his entrance into the war and all recovered. Two of the patients were unconscious when first seen by Dr. Boot. 4. The danger of doing lumbar puncture. It is not necessary to drain all the fluid from around the brain and cord. Only a little is needed for diagnosis and the removal of this amount is of little danger to the patient.

DR. ROBERT SONNENSCHNEN corroborated the point made by Dr. Good, that an infection from a cavity like the sinus might involve the dura and the intracranial contents without a lesion in the bone, and cited a case hearing out this fact. Another point which he considered good was the intranasal drainage in acute cases.

DR. NORVAL H. PIERCE thought everyone had regarded the dura as a dense, connective tissue, non-vascular membrane and a comparatively insensitive membrane. The fact that it conveys large blood-vessels did not warrant its being regarded as a vascular membrane in the commonly accepted sense of the term. He believed that Dr. Good had tried to make the subject too simple.

The matter of attempting to make a surgical law which would embrace the treatment of otitis of the long bone and periostitis, so-called, of the nasal accessory sinuses and mastoid was futile. They were two entirely different propositions, anatomically, physiologically and therapeutically, and the same surgical principles could not be applied. To say that one should, given an acute inflammatory process, open the accessory sinuses of the nose, or the sinuses of the ear, as one would perhaps open a periosteum in a periostitis of the long bone was bad surgery, that and nothing more, because at the beginning of nearly every case of acute rhinitis or otitis media, probably in every case, involvement of the accessory cells of the nose or ear was present. He did not believe anyone would advocate exenterating the ethmoid cells in every acute rhinitis.

He thought everyone who had had any experience at all had seen large collections of pus between the dura and the bone without any symptoms whatever and that often these collections of pus were not suspected at all before operation. When such symptoms were present as the X-rays had thrown upon the screen as a rule it meant very grave intracranial lesions.

He emphasized the point made by Dr. Boot that it was not at all dangerous to do a lumbar puncture, even in cases of brain tumor, if proper precautions were observed, and the puncture must be made for purposes of differential diagnosis.

DR. JOSEPH BECK was entirely in accord with the gentlemen who had previously discussed the paper. As to edema of the dura, he was sure that it would require much more than merely looking at a small area to say that the dura was edematous. As to lumbar puncture, they had come to believe from experience that it was of great aid in the diagnosis of intracranial conditions. He did not think it was possible to accent many points in the paper.

DR. OTTO STEIN said that in operations about the hypophysis by the intranasal route, under local anesthesia, one had good opportunity to test the sensitiveness of the dura, and he had

never yet had a patient complain of pain in incising the dura, or even in excising a large part of it as in cases of cysts. He had also seen mastoid cases in which no symptoms of extradural irritation were present, and yet operation revealed lateral sinus involvement of acute origin, with either perisinus abscess or infected sinus thrombosis.

DR. ROBERT GOOD (closing) said that he would report later on several cases of frontal sinusitis where there was extradural irritation present. To say that the dura was not a vascular structure he thought meant that they had forgotten their anatomy. Many times he had spent several minutes stopping the bleeding when incising the dura, and the blood in the dura weighed as much as the dura itself. The dura was also extremely sensitive to inflammatory irritants. He thought he was as conscientious as any other man about getting rid of a sinusitis without operating, but if the patient was lying in bed moaning and groaning he could not sleep at night and let the patient suffer. He could open the frontal sinus just as well as some surgeons could open the abdominal cavity, and on account of the brain tissues being so near one should operate much sooner to avoid intracranial complications. He believed in opening these cases early when they were not improved in a few days by medical treatment.

DR. JOHN A. CAVANAUGH presented a paper entitled: "Submucous Correction of the Nasal Septum." (Author's abstract.)

The speaker advocated the elevating of the mucous membrane on the convex side of the nasal septum and with his septum shaves removal of strips of cartilage necessary to replace remaining cartilage in the median line. He elevates the mucous membrane only on one side. When the tubercle is thickened or deflected he makes a groove below it with his septum shave, then introduces his blunt-end double-edged knife and elevates the mucous membrane on the opposite side over the tubercle and removes the tubercle with a biting forceps. When the bony part is deflected he breaks it over with his bone forceps, introducing the smooth blade on the attached mucous membrane side, and the roughened blade on the bone of the side of the mucous membrane has been elevated and fractures it, replacing same in median line. When ridges or spurs are present he elevates only on convex side and with his septum gauge removes the obstruction. He packs only on the side the mucous membrane was elevated, leaving the pack in place for twenty-four hours.

DISCUSSION

DR. ROBERT SONNENSCHNEN said he had had the pleasure of seeing Dr. Cavanaugh perform this operation. It was very skillfully done and apparently very simple. The principle of the operation was one of conservation. He thought if no modification of this technique was employed it might be a little difficult in some cases to get a large space at the internal portion of the nose. He considered the operation a good one and thought it would obviate the conditions so frequently seen where practically all the septum had been removed.

(To be continued)

DE KALB COUNTY

The De Kalb County Medical Society met at Sycamore, Ill., Oct. 29, 1919, with twenty-four physicians present.

Officers elected for 1920 were as follows: President, Dr. C. H. Wilkinson, Waterman; vice-president, Dr. J. W. Ovitz, Sycamore; secretary-treasurer, Dr.

C. E. Smith, De Kalb; censor for 3 years, Dr. J. P. Kane, De Kalb; censor for 1 year, Dr. O. J. Brown, De Kalb.

Dr. J. P. Kane, who had twenty-one months of service abroad, gave a splendid address on "Traumatic and Hemorrhagic Shock." The subject was so well handled and showed so many new ideas that it was unanimously voted to send his paper to the *Journal A. M. A.* for publication.

Dr. J. S. Rankin led a discussion on fees.

The society adopted a resolution expressing their appreciation to Drs. J. M. Everett, Louise L. Culver and Mareva D. Brown for the splendid work they did in the old De Kalb County Tubercular Association and heartily endorsed the sanitarium board and the new De Kalb County Tuberculosis Association.

CLIFFORD E. SMITH,
Secretary.

JASPER COUNTY

The annual meeting of the Jasper County Medical Society was held at Newton, November 12, 1919. The following officers were elected for the ensuing year: President, Dr. F. W. Keuchler, Hidalgo; vice-president, Dr. S. P. Berns, Willow Hill; secretary-treasurer, Dr. James P. Prestley, Newton; medico-legal representative, Dr. W. E. Franke, Newton; delegate, Dr. B. B. Hutton, Newton; alternate, Dr. T. L. Hutton, Willow Hill; program committee, Drs. Keuchler, Prestley and Franke. Dr. C. E. Price, councilor for this district, was present and made a very interesting and encouraging talk, which put renewed interest in the members present. Dr. Adkins of the State Tuberculosis Association entertained the society with well-timed remarks encouraging the society to renewed efforts in making the meetings more interesting and profitable.

We feel that our society has taken on a new lease of life and hope to give some better results in the near future.

JAMES P. PRESTLEY, M. D.,
Secretary-Treasurer.

LA SALLE COUNTY

The La Salle County Medical Society held its 67th annual meeting at La Salle, October 28, 1919, at the Illinois Valley Manufacturers' Club Rooms, Kaskaskia Hotel, with 50 members in attendance and were entertained by the Tri-City Medical Society at dinner. The following program was presented: President's address, Dr. J. S. Green, Utica. "Social Hygiene," Dr. E. C. White of the State Department of Public Health. "Lantern Slide Clinic and Discussion of Gall Stones, Enlarged Prostate, Exophthalmic Goiter and Thoracic Surgery," Dr. H. M. Richter, Chicago. "Polycythemia," with demonstration, Dr. Edgar C. Cook, Mendota. "Empyema," Dr. Robert I. Barickman, Streator. "Report of Two Cases Amebic Dysentery," Dr. D. A. Harwood, Streator. "Objective Diagnosis," Dr. Geo. K. Wilson, Streator. "Treat-

ment of Acute Suppurative Otitis Media," Dr. A. Conner, La Salle.

The following officers were elected for 1920: President, H. M. Orr, La Salle; vice-president, W. E. Coulter, Seneca; secretary-treasurer, E. E. Perisho, Streator; board of censors, one year, O. C. Yoder, Peru; two years, D. G. Conley, Streator; three years, M. H. Sawyer, Ottawa; delegate, J. H. Edgcomb, Ottawa; alternatè, H. C. Hill, Streator; medico-legal, E. W. Weis, La Salle.

MADISON COUNTY

Our October Meeting

The Madison County Medical Society met in Madison, Ill., October 3, 1919, President Dr. Chas. R. Kiser, presiding. Twenty-four members and three visitors were present.

The transfer card of Dr. Herman C. Tietze, of Livingston, from the Edwards County Medical Society, was read and upon motion was accepted. The report of the Board of Censors on the transfer card of Dr. W. W. Haven, of Granite City, was read and upon motion of Dr. Burroughs was adopted.

A letter from the Director of Public Health, Dr. C. St. Clair Drake, in regard to influenza, was read and ordered filed.

The Committee on Resolutions on the death of Dr. Joseph Pogue presented the following report, which was adopted.

REPORT OF COMMITTEE ON RESOLUTIONS

WHEREAS: It has pleased the Divine Ruler to call to his reward, after a long life of usefulness, Dr. Joseph Pogue, the oldest member of our society and the oldest practitioner in our county, therefore be it

RESOLVED: That in his death, the county has lost one of its most useful men, whose life was spent in the service of suffering humanity; that our society has lost one of the most ardent supporters of organized medicine and his family a most loving and indulgent parent. And be it further

RESOLVED: That these resolutions be spread upon our records and a copy sent to the family.

E. W. FIEGENBAUM,
W. H. C. SMITH,
E. C. FERGUSON.

Dr. W. H. C. Smith announced that a moving picture of nine reels, illustrating tuberculosis could be procured by this society and the secretary was instructed to secure this feature for our next meeting if possible.

Dr. Chas. H. Neilson, of St. Louis, gave a remarkably fine lecture on "Some Points in Diagnosis." He made a plea for more thorough and more scientific examination of the patient, which would result in avoiding many of the incorrect diagnoses that were being made. A vote of thanks was tendered the speaker for his helpful suggestion. The meeting of the Southern Illinois Medical Society at East St. Louis was announced and as the date of that meeting would conflict with the date of our next meeting, it was

ordered by vote that we meet on the second Friday in November instead of the first.

On motion adjourned.

PIKE COUNTY

The Pike County Medical Society met at Barry, October 30, 1919, with a much smaller attendance than usual on account of the bad roads for motor cars; however it was an enthusiastic meeting and those present were more than repaid for their time and efforts.

In the absence of the president, Dr. C. E. Beaver of Barry was elected president *pro tem*, and the society then listened to two splendid papers.

The first on "The Spastic Colon," by Dr. Kirk Shawgo of Quincy was received with attention and elicited a well directed discussion.

Dr. Walter Stevenson of Quincy then read a paper on "Minor Ailments of the Eye, Ear, Nose and Throat," which was much appreciated and the society voted to have it published in the ILLINOIS MEDICAL JOURNAL. After discussion of various topics involved in this paper, the society adjourned to meet in Pittsfield at its next regular session.

W. E. SHASTID,
Secretary.

CHICAGO OPHTHALMOLOGICAL SOCIETY

A regular meeting was held April 21, 1919, with the vice-president, Dr. A. L. Adams, Jacksonville, Illinois, in the chair.

RESUME OF RESULTS IN MORAX CLINIC WITH SNYDACKER'S OPERATION

Dr. E. F. Snyder said that about fifteen years ago a patient, a girl, came into his service at the Michael Reese Hospital frightfully burned. She was an epileptic; she had fallen onto a stove in a fit, and she had virtually fried the side of her face: From there she got into the Cook County Hospital, and he tried to remedy a severe ectropion of both the upper and lower lids by using Thiersch and Wolf grafts. These grafts had taken, but were so degenerated and so shrunk that, if anything, they added to the hideousness of her appearance rather than benefited her.

When he saw her it was simply a problem of getting flaps because the injury was so severe, the burns were so deep and so adherent to the bone everywhere, that he realized it was impossible to correct the difficulty with grafts, so his object was to get skin that he could use for plastic purposes, and in looking her over carefully and studying the situation it seemed to him there was one place from which he could get the skin. She was literally fried from the top of the forehead right down to below the jaw, and the only skin he could see that was available was the skin of the neck, and he conceived the idea of taking a long flap, going down the neck. The skin seemed to be loose and suitable for plastic skin, so

he took a long flap, cutting it at an angle, and as the case was so deformed anyway, he had everything to gain and nothing to lose. He began at the angle of the jaw, cut diagonally a flap ten inches in length, turned it up to avoid kinking of the pedicle as much as possible. He laid this on a bridge of gutta percha, and covered the upper portion of the flap with gutta percha. He took a flap from the neck, turned it up, split the two ends with one of which he covered the upper lid, with the other the lower. He covered the upper defect with the upper tongue of this flap and the lower defect with the lower tongue of the flap. He left this flap in place seven or eight days, at the end of which time it was an easy matter to close the wounds in the neck. The skin was elastic and plastic. The deformity in the neck was largely concealed by the collar. At the end of seven or eight days he cut a bridge off which he did not need because he was able to cover the wound in the neck very easily. He simply cut that off at the time of the operation and was able to close the wound in the neck nicely. In cutting off this bridge he made use of only one suture to close the wound in the neck entirely, the rest of the wound had been closed at the time of the operation and he found that he made a nice repair of what seemed to him an impossible situation.

He showed this girl before a meeting of the Chicago Medical Society at the time and the result seemed a very nice one.

He had had occasion in fifteen years to do this operation four times. One case was a severe case of lupus which had been treated by the X-ray, and in addition to the lupus she had got frightful X-ray burns with great sloughing of the skin. She had lost the side of her nose completely, so that the whole septum was exposed. There was a gapping wound beside the nose. The lower lid was entirely gone. This was another case where he needed a very large skin surface to repair this very extensive defect. Again, he did the same operation. This time he made the flap a little more slanting; in fact, he had to make a little turn in the pedicle and he wished to avoid that this time. He also went a little lower because he became more bold. There was no danger of its sloughing if one followed certain basic principles. He went below the clavicle, turned the flap of skin up and was able to do a blepharoplasty and rhinoplasty with the same operation from the same flap. He made a lower lid and a new nose. The skin grew perfectly without trouble, and he again followed the method of cutting off the bridge.

In the third case there was a severe gangrenous sloughing following an automobile accident in a boy who was dragged along the street.

The fourth case was a severe burn, not as severe as in the case of the girl who had epilepsy, but this time he believed the operation was feasible and should be done. It was done, and was not followed by any special deformity because the collar concealed the wound and the subsequent scar very well, so he went in rather boldly, and the only case in which he did not

get a satisfactory result was in the case of the automobile injury, and the reason he thought he did not get a satisfactory result was because he operated too soon while there was still some slough, and he had to do another operation to correct the partial failure which he had.

He published this operation in the Archives of Ophthalmology, and later in the *Klinische Monatsblätter*.

Morax took up the operation and modified it. He thought the first case that Morax operated was one of a very severe loss of tissue in a sloughing nevus, one of those large nevi that covered the face. He presented a picture showing the operation Morax performed. Morax made the operation, and instead of throwing away the bridge which the speaker cut off, and throwing away the portion he did not use, he conceived the idea that when he had taken a flap from the neck, he turned it up, covered a part of the defect or as much as he could in the first operation, then instead of cutting this part off, throwing it away, he waited until circulation was established; he left it a little longer than Dr. Syndacker did. He took the other part and turned that up and covered the rest of the defect with a portion of the skin which Dr. Snyder had thrown away.

Morax had performed this operation seven times, and he also found that while it seemed a severe procedure and a daring one to take flaps ten, eleven or twelve inches long, it could be done with perfect impunity. If one followed certain basic principles there was no danger of losing any of the flap, and furthermore, the resulting defect or difficulty was far less than where one added to the difficulty by taking flaps from places where you could not conceal them. Where one took a flap from the neck the collar would conceal practically the whole wound, and so he (Morax) found that it was a thing that could be done with perfect impunity. One could take large defects and cover them perfectly with plastic skin well adapted for the purpose and do this without materially adding to the difficulty.

A man by the name of Delmasso in Madrid performed the operation successfully, also a German named Fulchen.

An assistant of Morax had published an inaugural dissertation on this operation which he had done in his clinic and also a resumé of the cases on which they had operated by this method.

No one claimed that such an operation should be done for slight defect. To remedy the ordinary ectropion one would not go down and take a long flap of skin to remedy a slight defect, and the speaker said he had never claimed that this operation was adapted for such a purpose nor did he expect it would be used for such a purpose. What he did claim was this; it was an operation which replaced the old Italian method, the Tagliocozy operation, anchoring the arm to the head; especially in rhinoplasty, where they had to have a large skin surface, where they anchored the arm to the head for ten days, and made a bridge

from the skin of the face or nose. The operation described was so much more practical, simpler and safer that it surely would in time displace that operation. This claim Morax had substantiated. It was a simpler operation to do than the old Italian operation. It was perfectly possible to do the operation without loss of flap which in a certain number of cases one was bound to lose in the Italian method because where there was communication of the flap passing from the arm to the face, one was bound in a certain proportion of cases to have infection, no matter how carefully he protected the flap. One could not absolutely protect it.

If in making these flap operations one carefully measured the size of the defect that he wanted to cover and carefully marked out how far he wanted to go, and allow for a liberal shrinkage, say thirty to forty per cent., if one made the incision diagonally, following the sternocleidomastoid muscle, there was not much likelihood of a kink in the pedicle. If one would avoid kinking of the pedicle, if he was immaculately clean in his work, if the flap was made large enough so that there was no tension on it, it would take every single time. There was no reason why a flap ten inches long should not take as well as one two inches long.

He thought the operation was better for rhinoplasty than for blepharoplasty, but one could combine the two as he had done in the lupus case. For these severe defects the operation was feasible and surely simpler and easier to do than the old Italian operation.

DISCUSSION

DR. DWIGHT C. ORCUTT asked Dr. Snyder how he prepared the surface.

DR. SNYDACKER replied that he made the ordinary preparation.

DR. ORCUTT asked whether he removed the skin of all the thickened tissues before he operated and how long before.

DR. SNYDACKER said that it was necessary to dissect out all adhesions; that one had to put the lids on a stretch, and this was one of the hardest things to do. The lids ought to be sutured together for a number of weeks, six weeks was better than two or three weeks, but the longer one sutured the lids the better the result.

There was one difficulty in the operation he failed to speak about, and this was one got a rather heavy upper lid; that is to say, the skin was a little heavy over the upper lid, and when one got through there was a slight ptosis of the upper lid, but it was far better to have redundant heavy skin, and he would a good deal rather have ptosis than an ectropion which almost always recurred where one got too little. This was the difficulty in any flap operation on the upper lid, namely, that when one got through he was apt to have a slight ptosis. There was no question that the Thiersch grafts in the first result were nicer looking lids and better acting lids for the first few months, but anyone who had seen much work done with Thiersch grafts knew where there was extensive defects that in the end they shrank and degenerated and the result was unsatisfactory.

DR. WOODRUFF, Joliet, Illinois, thought that the operation described by Dr. Snyder would be very valuable in many of the severe cases that he spoke of. The speaker believed that ectropion of the upper lid could be repaired by the use of Thiersch grafts much more readily than the lower lid. In the lower lid one was more apt to have a return of the ectropion with Thiersch grafts but it did not apply to the same degree to the upper lid.

The cases of destruction of the entire lid, both the conjunctiva and skin surfaces, would require something still further in order to make an eyelid.

The speaker saw something in the line of skin grafting in the work done by Dr. New in the Mayo clinic which was exceedingly interesting. In repairing a nose Dr. New dissected a flap from the forehead, dissected the skin up, and put a Thiersch graft on the raw surfaces of the flap, so that he had a flap both surfaces of which were covered with epithelium. When the graft had taken, he swung this down to make a nose, so that he had both the internal and external surfaces covered with epithelium. It occurred to the speaker that this same scheme could be adapted to restoring eyelids where it was necessary, as where the entire structure of the lid, both conjunctiva and skin had been removed for malignant growths or lupus.

DR. OLIVER TYDINGS said the society was to be congratulated on having the privilege of listening to the description of the operation of Dr. Snydacker, which was scientifically conceived and brilliantly executed with beautiful results. As he understood, the condition for which the operation was performed was not one where all of both eyelids had been lost, but distorted remnants of all tissues except skin remained; the muscle was still intact if not in place.

DR. SNYDACKER said it was not to replace cartilage.

DR. TYDINGS said it could not replace cartilage or muscle; that a globe left exposed by accident or disease would be in great danger.

DR. SNYDACKER said that in the automobile case in which there was sloughing a strip of cartilage with a few hairs was adherent, and he had something to anchor the skin to.

DR. TYDINGS asked what protected the cornea.

DR. SNYDACKER replied that the cornea was not injured.

DR. TYDINGS asked about the length of the exposure of the globe, especially the cornea to the drying influence of air.

DR. SNYDACKER replied that there was no long exposure.

DR. TYDINGS said that if the musculature was preserved one had a base on which to work. The main point in the handling of these cases with ectropion was to keep as far away from the bony surface of the orbit as possible and dissect as close to the ciliary region, being careful not to injure the follicles of the hair bulbs, and not to disturb scar tissue beneath, where it was adherent to the bone, because many of these cases were attendant upon fracture, as observed by the late Dr. Beard, and by keeping away from the orbital walls one could obtain better results.

With regard to the use of the Thiersch graft on the upper lid, he had never had a failure. He had always covered it well. He recalled one particular case in a young woman, the whole lid was everted, the ciliary margin attached to the upper orbital wall, the conjunctiva and tarsal cartilage everted, and presenting an unsightly mass. The condition was due to an abscess occurring in childhood. By dissecting close to the ciliary body and making as large a flap as he could, from above, dissecting the surface free and using a Thiersch graft he got a beautiful result. The only trouble was, it was in a colored woman and the skin he took from the inner side of the arm when exposed to the sun, turned black and looked as if painted. Ultimately it faded out and was not observable, or not as markedly as in the first place. He had never had occasion to employ the extensive grafts, but if he had he would follow the suggestion and work of Dr. Snydacker.

There was one point he desired to speak of and this was concerning the case of lupus that had been treated with unfortunate results by the X-ray, which treatment had caused an X-ray burn. One could get results every time in treating lupus by the use of tuberculin. He could arrest the progress with tuberculin, and he had never seen it fail in a case of lupus. It was lupus that first attracted his attention to the use of tuberculin.

DR. RICHARD J. TIVNEN emphasized the importance of the dressing used in these cases. There was no class of work in his judgment where there was so much attention to detail demanded as in cases of skin grafting. Among the essen-

tial details one of the most important was the after-care and the method of dressing. It was the general impression among surgeons that grafts prosper better without any dressing, that is, the "open method." His own experience had taught him the advantages of the open method of dressing and he now used it entirely.

DR. SNYDACKER stated, in reference to the use of grafts on the lid, that for smaller degrees of ectropion he had resorted to a little operation which he reported a few years ago. He had found it so simple, so easy and so certain in the smaller degrees of ectropion that he had been using it since then. Where he had a lower lid to deal with he repaired the defect in one lid by using the skin of the other lid. He made a circular flap and used skin, following the lines of the orbicularis and anatomical lines. If he wished to repair the lower lid he loosened the outer angle of the eyelid; he destroyed the hairs at the edge of the lid; he dissected or loosened the skin of the upper lid by means of a Graefe knife for a short distance, drew down the upper lid, brought the circular flap in place and replaced it. The ectropion could not return because the lines of shrinkage were in the opposite direction to the ectropion.

INFLUENZA AS A CAUSATIVE FACTOR IN ACUTE GLAUCOMA

DR. DWIGHT C. ORCUTT said that during the last few months, since the prevalence of influenza, there seemed to have been a larger number of cases of glaucoma observed at the infirmary. About Christmas and during January there was a marked increase. He had seen more of the sequelae of influenza in the various conditions which he handled, such as headache, transitory diplopias, than ever before in the same length of time so that he began to inquire among the cases of glaucoma and found that the majority of them gave a history of having had influenza during the fall or winter and was followed by a glaucomatous attack in some instances immediately. Reasoning then from analogy the recent contagion was of the edematous type and glaucoma being a disease of embarrassed circulation thus giving a lucid explanation. Of the pneumonia patients who died, many of them he thought died of acute edema. When one was called in to see cases of influenza he observed puffy, edematous-like conditions of the body. There was a stasis of the circulation, and glaucoma being a circulatory disease and the circulation being very poor, produced the glaucoma, so that he brought this subject up to find out what the experience of other members might have been during the past few months in regard to glaucoma.

DR. MUNNS, he said, had the data taken from the histories of patients at the infirmary, and through the kindness of other members of the staff they had been able to get a list of the cases they found during the past six months, and in comparison with them they had gone back over a period of some four or five years trying to find out the number of cases of glaucoma.

DISCUSSION

DR. SHIRLEY BOGART MUNNS stated that most of the textbooks of general medicine and quite a few of the many recent papers only mentioned glaucoma as a complication of influenza. All of the standard textbooks on diseases of the eye mentioned influenza as an exciting cause of glaucoma.

With this in mind one should not expect a paper dealing with glaucoma in relation to the recent influenza epidemic to be in any way startling.

In comparing the cases of glaucoma admitted to the Illinois Charitable Eye and Ear Infirmary during the months beginning September 1st, 1918, and ending March 31st, 1919 with those admitted during the corresponding seven months of the three preceding years, one finds a great increase in the acute from during the past seven months. To simplify the classification, the simple chronic cases, of which there were very few, and the chronic inflammatory cases were classed under one head as chronic. In 1915-16, 14 per cent. of the cases of glaucoma were acute; in 1916-17, 26 per cent. were acute; in 1917-18, 20 per cent. were acute and in 1918-19 60 per cent. were acute.

During the past seven months there were 13 cases of acute glaucoma admitted to the infirmary and 9 cases of chronic glaucoma. Of the 13 acute cases, 8 gave a history of the so-called Spanish influenza preceding the onset, one followed an attack of erysipelas, another had at the time of entrance a late secondary syphilid and a four plus Wassermann, while another proved to be a diabetic. The two other acute cases gave no history which would suggest an exciting cause. Only two of the nine chronic cases gave a history of Spanish influenza immediately preceding an acute exacerbation. There were twice as many cases of secondary glaucoma during the past seven months as there were during the same period in any of the three preceding years.

In the acute inflammatory variety of glaucoma which we were considering in this paper, the pathological condition was classified as an inflammatory edema. Not only was the actual fluid increased in amount, but the very vascular uveal tract was edematous throughout. Now Spanish influenza was *per se* a disease of edema. If the toxin would so alter the vessel wall that the blood serum would pass too rapidly into the surrounding tissues, was it not possible that this might occur in the uvea? Extensive involvement of the lungs obstructed the pulmonary circulation and thus produced venous stasis which might tend to favor the production of glaucoma. Atropin was the one great drug used during the recent epidemic. It was given in larger and more frequent doses than ever before. It was not uncommon to find the patient with atropin mydriasis. Could not this have been a causative factor in the production of glaucoma? Producing mydriasis by dropping atropin into the conjunctival sac of persons over forty was a dangerous procedure. All of the cases they had of acute glaucoma complicating Spanish influenza were over four years of age.

Returning to the statistics, 5 of the 18 cases of acute glaucoma did not bear any relation to the recent epidemic. With only 5 acute cases the proportion of this type was reduced to that of the three preceding years. Thus it could be assumed that the 8 cases, while probably predisposed to glaucoma, were directly excited by an attack of Spanish influenza.

DR. CLARENCE LOEB stated that the remarks of the previous speakers would seem to show that there was some relationship between so-called influenza and acute glaucoma. In speaking of this one should be very careful to distinguish between the influenza we knew a great many years ago and the influenza that occurred in the last year. The former was the product of the influenza bacillus, whereas the latter was an entirely distinct disease so far as we had been able to learn from internists. Therefore, he thought in the title of the paper a distinction should have been made between recent influenza and the so-called Spanish influenza.

DR. G. HENRY MUNDT said he would like to know whether any difference was noted in the efficacy of the treatment of the 8 cases reported with eserine or operation. The theory or supposition was that eserine was probably less efficacious than in the ordinary type of glaucoma. The speaker had seen some cases of glaucoma following or during an attack of so-called Spanish influenza, two of them were acute and one noninflammatory which developed during an acute attack of influenza.

He thought the members should be very cautious about

saying much regarding the use of atropin precipitating glaucoma. He did not know whether it did or not, and he would like to hear the experience of others in regard to precipitating glaucoma by the use of atropin.

DR. HARRY M. IVINS, Cedar Rapids, Iowa, said he had had a few cases of acute glaucoma during the winter months when the influenza was quite prevalent. Whether or not the influenza had anything to do with producing the glaucoma he could not say. He had not thought of it in that light.

As to the use of atropin in producing or precipitating glaucoma, he had always supposed that glaucoma could be caused and was caused by the use of atropin.

He recalled the case of an old gentleman who was working in the Masonic Temple at Cedar Rapids and was seized with a severe pain in his eye. He went to the family physician who supposed that the man had an iritis. He put atropin in the eye, and before the doctor discovered what had happened the man was blind in that eye, and later he became blind in the other eye and today was totally blind in both eyes. This was an instance where a man went blind following the use of atropin, although it did not prove he did not have glaucoma in the first place or would not have had it and would not have been blind.

DR. THOMAS O. EDGAR, Dixon, Illinois, in reply to the question of Dr. Mundt, cited a case of irido-cyclitis, that he had recently observed, in which atropin was indicated, but, almost every time it was used the tension went up temporarily; and when atropin was discontinued the tension would go down. On the other hand, during an exacerbation of a case of chronic irido-cyclitis, with extensive posterior synechiae, the use of atropin caused the tension to become normal again, undoubtedly because it loosened up the adhesions. Such experiences were not isolated.

Personals

Dr. B. R. Cole has sold his practice in Kenney and will retire in January.

Dr. Clarence W. Leigh was reappointed city physician by the mayor of Chicago, November 10.

Dr. J. W. Potts, of Lacon, has resumed practice after a long illness.

Dr. Byrt B. Hutton has resumed practice in Newton.

Dr. W. D. Madison has removed from Roanoke to Decatur.

Dr. S. W. Williams, after 27 months' service, has resumed practice in Eldorado.

Dr. J. N. Thresh, of Danvers, will continue his studies in New Orleans at Tulane University.

Dr. W. E. Chapman, of Leland, has been promoted to the rank of major, dated October 8, 1919.

Dr. J. W. DeVry, Division of Social Hygiene, State Department of Health, has removed from Chicago to Springfield.

Dr. Todd P. Ward, having returned from military service, has resumed practice in Mt. Vernon.

Dr. Meyer Solomon, recently released from military service, has resumed practice in Chicago.

Yeggmen held up Dr. Jerome J. Weil of Chicago in Kenilworth recently, taking \$14 toll, but returned \$1 carfare.

Major George W. Clarke, after discharge from the service at Camp Bowie, has returned to his former home in Roseville.

Dr. B. V. McClanahan, who was on the surgical staff of Great Lakes Naval Hospital for six months, has returned to Galesburg.

Dr. A. Lee Alderson, after service abroad as Major in the Medical Corps, has returned to his home in Vera.

Major Arthur Fletcher, after two years' service in France and Germany, has resumed practice in Danville.

Dr. B. F. Zobrits, formerly of Camargo, was discharged after 27 months' service and has been visiting in Decatur and southern Illinois.

Dr. George G. Davis has been appointed chief surgeon of the Illinois Steel Company, succeeding Dr. James Burry, deceased.

Dr. Thomas J. O'Malley, Chicago, after an extended service as major, M. C., U. S. Army, at Camp Merrit, N. J., has been discharged from the military service.

Dr. B. O. Swinehart, of Cooksville, has purchased the practice of Dr. J. N. Thresh of Danvers and has resumed practice in the latter place.

Dr. Roswell Pettit, of Ottawa, acting surgeon of the U. S. Public Health Service, gave an address in La Salle before the Anti-Tuberculosis Society of that city.

Dr. William Arthur Clark, formerly a member of the staff of St. Luke's Hospital, has been discharged from the army and has left Chicago to work in the department of orthopedic surgery at the Mayo Clinic, Rochester, Minn.

Captain Harold Swanberg, M. C., U. S. Army, has been discharged after over two years service in charge of the X-Ray Laboratories of the Army General Hospitals at Fort McPherson, Ga., and Fort Sheridan, Illinois, and has opened a Roentgen Laboratory at Quincy, Ill., where he is limiting his practice to this specialty.

News Notes

—Kankakee is to have a new emergency hospital, construction to begin soon.

—Champaign county has purchased a site for a tuberculosis sanitarium near Sidney.

—The new hospital for tuberculosis in Logan county occupies a beautiful farm of 400 acres, five miles from Rockville.

—Christian County has voted a tax for the building and maintenance of a county tuberculosis sanitarium.

—A 10-acre site has been purchased near Rantoul for \$10,000 for a county tuberculosis sanitarium.

—The German-American Hospital, Chicago, changed its name, October 20, to the Diversey Parkway Hospital.

—By the will of the late John Kirby, of Monticello, his late residence is given as the site for a hospital with an endowment of \$100,000 and \$50,000 more "if needed."

—Plans and a contract for a \$60,000 tuberculosis sanitarium have been approved by the Tazewell county supervisors and the county sanatorium board.

—Dr. Anthony Biankini was tendered a farewell dinner by the Czecho-Slovak citizens of Chicago October 28. He left for Europe the following day.

—If you notice a \$12,000 radium tube floating down the drainage canal, the Illinois river, the Mississippi or anywhere west of Florida, call up Dr. Henry Schmitz, whose patient is said to have shed it in St. Mary's hospital, Chicago.

—It is reported that the Will County Medical Society passed a resolution to bar reporters from meetings of the society, but the secretary will give out proceedings to the press when matters transpire of interest to the public.

—At the meeting of the physicians of Canton, October 9, the Canton Physicians' Club was reorganized, with Dr. Harvey H. Rogers, president, Dr. Charles N. Allison, vice-president, and Dr. Everett P. Coleman, secretary.

—At a largely attended "get-together" meeting of the District Medical Society of Illinois, in Pana, Oct. 30, the following officers were

elected: president, Dr. H. E. Monroe of Shelbyville; vice-president, Dr. R. L. Morris of Decatur; secretary, Dr. F. A. Martin of Pana; treasurer, Dr. Morley of Vandalia.

—The Wesley Memorial Hospital has adopted a key to be worn by members of the resident staff who have completed a satisfactory term of service. Former Wesley interns who completed one year of service with honorable record may secure keys on application to the superintendent or to Dr. D. W. Propst.

—Dr. Frank P. Norbury, of Springfield, offers to act without salary as director of a clinic for mental hygiene in Springfield in collaboration with the public schools, the juvenile court, the Red Cross, the Associated Charities and the State department of public welfare, provided a trained clinical psychiatrist is financed.

—Drs. A. F. Zwich, Joseph E. King, Frank A. Butler, Harlon H. Gordan, Charles W. Wren and Wesley E. Burnett are said to have been arrested, charged with prescribing habit-forming drugs to drug addicts. One of these defendants is said to have issued 3,000 prescriptions for morphin and its derivatives.

—Major-Gen. Sir Anthony Bowlby and Major-Gen. Sir Robert Jones, R. A. M. C., were in Chicago, November 1 and 2, and addressed a joint meeting of the Chicago Surgical Society and Chicago Orthopedic Society and were entertained by the members of these societies at dinner at the University Club.

—At the annual meeting of the Chicago Gynecological Society, held October 17, the following officers were elected: president, Dr. Arthur H. Curtis; vice-presidents, Drs. Henry F. Lewis and Philip S. Doane; secretary, Dr. Joseph L. Baer; treasurer, Dr. Charles B. Reed; editor, W. C. Danforth, and pathologist, Dr. Carey Culbertson.

—The Chicago Tuberculosis Institution has already one traveling clinic and hopes, through the sale of Red Cross Christmas Seals, to secure sufficient funds to purchase a second automobile. The car is a completely equipped clinic which travels a regular route through the county towns. It is to be accompanied by a physician and a nurse.

—At a meeting of the Chicago Medical

Society, Nov. 12, after a paper by Dr. Rudolph W. Holmes on "Midwife Practice—An Anachronism," President John V. Fowler was instructed to appoint a committee to confer with Francis W. Shepardson, director of the department of education and registration, with regard to an investigation of the midwife situation in Chicago.

—Drs. George Thomas Palmer, C. W. East and White, of the State Department of Health, addressed the Alton Public Welfare Council, Nov. 12. Dr. Palmer advocated the early establishment of a tuberculosis sanitarium for which the people of the county recently voted. Dr. East, who has been holding clinics in Alton for the treatment of crippled children, and Dr. White both advocated the establishment of clinics to protect children from tubercular infection.

—Rev. James Moore Hickson, the English clergyman who introduced divine healing into two Episcopal churches in Chicago recently, has met with some success according to church papers. Some of the clergy hail him with open arms and will continue his services. Others are skeptical and compare him with Dowie and Christian Science. Even the Church papers admit that the great majority of his "patients" show no miraculous cures.

—The Southern Illinois Medical Association held its 44th annual meeting, Nov. 6-7, in East St. Louis, which had been delayed a year on account of the influenza epidemic. About 100 delegates attended and the following officers were elected: president, H. H. Roth, Murphysboro; first vice-president, C. E. Eisele, East St. Louis; second vice-president, H. C. Moss, Carbondale; secretary-treasurer, A. B. Capel, Shawneetown; assistant secretary, Dr. C. W. Lillie, East St. Louis.

—The Abbott Laboratories of Chicago favor us with a copy of "Abbograms," an exceedingly attractive 8-page publication, edited by and for employees of the Laboratories. The current issue is dated November, 1919, and is number 3 of volume 1. A turkey in full array heads the leading article, "A Hymn of Thanksgiving." The number is replete with contributions in prose and verse and carries some excellent cartoons. Emanating from the home of the *American Journal of Clinical Medicine*, the style of "Abbo-

grams" is, of course, *secundum artem* and it will be a welcome visitor to the employes and their friends.

—The Gradwohl Biological Laboratories, of 928 N. Grand Avenue, St. Louis, have issued an exceedingly attractive and valuable 32-page pamphlet called "The Doctor's Laboratory Manual." The present issue is volume 1, number 1, November, 1919. The announcement states that the object of the publication is to place before the profession both the simple tests that the physician can make himself, as well as the more complicated tests that require the facilities of a modern laboratory. Numerous quotations from standard literature, together with well written descriptions of the methods pursued in this laboratory make it a valuable handbook of ready information for the busy practitioner.

Marriages

LOUIS SAVITT to Miss Bess Sparberg, both of Chicago, October 26.

SOL BERNARD KOSITCHEK, Chicago, to Miss Josephine Kapp, at Battle Creek, Mich., Oct. 30.

ROY LAFAYETTE OWENS to Miss Mary Veronica Murphy, both of Chicago, October 1.

HOMER P. MACNAMARA, Springfield, Ill., to Miss Mabel Palmer Cowdin of Chapin, Ill., Oct. 27.

Deaths

GEORGE O. TAYLOR, Chicago; Rush Medical College, 1868; died at Hot Springs, Ark., November 14, from malignant disease.

SAMUEL C. HEWITT, Chatham, Ill.; (license, years of practice, Illinois, 1878); aged 84; a veteran of the Civil War; died at his home, October 6.

CLAYTON W. CARSON, Chicago; Rush Medical College, 1884; aged 59; died in his automobile, near St. Luke's Hospital, November 8, from angina pectoris.

WILLIAM FINLEY SEMPLE, Chicago; Rush Medical College, 1881; aged 58; a Fellow A. M. A.; died at his home, October 12, from angina pectoris.

LUTHER HOLT, Iuka, Ill.; Washington University, St. Louis, 1887; aged 57; a member of the Illinois State Medical Society; died at his home, August 23, from valvular heart disease.

THOMAS F. LEECH, Downers Grove, Ill.; Jefferson

Medical College, 1866; aged 78; a veteran of the Civil War in which he served as surgeon, U. S. Navy; died at his home, October 30.

FRANCIS DRENNAN FLETCHER, Capt., M. R. C., U. S. Army, Springfield, Ill.; Rush Medical College, 1902; aged 39; a Fellow A. M. A.; died in Liverpool, England, July 30, five days after an operation for perforating gastric ulcer.

EDWARD TRACY ROBINSON, Chicago; Bennett Medical College, Chicago, 1906; aged 40; while motoring from Casper to Sheridan, Wyo., was instantly killed, July 25, when the car ran off a bridge, crushing Dr. Robinson beneath it.

TREVANIAN V. DUPUY, Chicago; Miami Medical College, Cincinnati, 1889; aged 57; formerly safety director of Ironton, Ohio; was found dead in Jackson Park, Chicago, October 28, death being due to a gunshot wound of the head, self-inflicted, it is believed, while despondent on account of ill health.

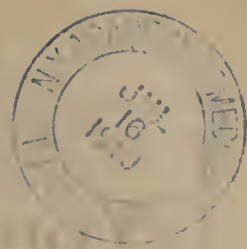
CHAUNCEY W. COURTRIGHT, Chicago; Cleveland University of Medicine and Surgery, 1877; Northwestern University Medical School, Chicago, 1887; aged 69; a Fellow A. M. A.; a member of the staff of the Englewood, Washington Park, Lakeside and Fort Dearborn hospitals; died, November 9, from carcinoma of the bladder.

JOHN MULLER, Chicago; College of Physicians and Surgeons, Keokuk, Iowa, 1876; aged 78, for four years professor of languages at the University of Upsala, Sweden; interpreter at the Oriental Congress in Stockholm; lecturer at the Università Popolari, Milan, Italy; once lecturer and demonstrator of anatomy at St. Louis Medical College; died in Alexian Brothers Hospital, Chicago, October 24.

MARTIN D. FOSTER, Olney, Ill.; Eclectic Medical Institute, Cincinnati, 1882; Hahnemann Medical College, Chicago, 1894; aged 58; mayor of Olney in 1895 and 1902; for six terms congressman from the Twenty-Third Illinois District, and thereafter a member of the government commission to adjust war mineral claims in the Western states; died at his home, October 20.

JOHN ROSS, Pontiac, Ill.; Rush Medical College, 1894; aged 52; a Fellow A. M. A., one of the best known practitioners in Livingston county and secretary of the Livingston County Medical Society for the past twenty years continuously; died at St. James Hospital, Pontiac, Nov. 18, from injuries sustained while driving across railroad tracks in Pontiac, his automobile being struck by a special fast train.

JUNIUS MERWIN HALL, Chicago; College of Physicians and Surgeons in the City of New York, 1874; aged 68; for fourteen years a medical inspector under health commissioner of Chicago, and on duty during the smallpox epidemic of 1880 and 1881; for many years a member of the attending staff of the Passavant Memorial Hospital; died at his home, October 30, from cirrhosis of the liver.



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THE BOSTON NUMBER

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Clinic of Dr. Henry A. Christian, *Peter Bent Brigham*

Cutaneous Pigmentation, Jaundice, Enlarged Liver and Ascites, Fibrinous Bronchitis

Clinic of Dr. Frederick T. Lord, *Massachusetts General*

A Pulmonary Destructive Lesion

Clinic of Dr. John Lovett Morse, *Children's*

Infantile Scurvy: Prevention, diagnosis, treatment

Clinic of Dr. Wm. P. Graves, *Free Hospital for Women*

Cancer of Uterine Body as Borderline Case in Gynecology

Clinic of Dr. Francis W. Peabody, *Peter Bent Brigham*

Lessons of the War in Cardiac Disease

Clinic of Dr. Franklin W. White, *Boston City*

Improvement in Medical Treatment of Chronic Gastric and Duodenal Ulcers

Clinic of Dr. Charles J. White, *Harvard Medical School*

Common Errors in Dermatologic Diagnosis and Treatment.

Contribution by Dr. John B. Hawes, 2d, *Massachusetts General*

Tuberculosis as Sequel to Influenza

Clinic of Dr. Channing Frothingham, *Harvard*

Aortic Aneurysm

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Contribution by Dr. H. Linenthal, *Massachusetts General*

Relation of the Clinician to Industrial Medicine

Clinic of Dr. Lewis Webb Hill, *Children's*

Nephritis in Children

Clinic of Dr. James P. O'Hare, *Peter Bent Brigham*

Chronic Nephritis with Edema

Clinic of Dr. George R. Minot, *Massachusetts Gen.*

Enlarged Spleens: Splenic anemia; Banti's disease; splenectomy; differential diagnosis; treatment

Contribution by Dr. Fritz B. Talbot, *Massachusetts General*

Diet in the Development of Children

Contribution by Dr. Arial W. George and Dr.

Ralph D. Leonard, *Tufts Medical School*

X-ray in Multiple Diverticulitis of Colon

Clinic of Dr. Geo. Cheever Shattuck, *Massachusetts*

Chronic Pulmonary Tuberculosis and Arteriosclerosis, War Nephritis and Chronic Adhesive Mediastinopericarditis, Syphilis Involving the Myocardium, Aorta, and Aortic Valve: Healed Ulcer of Stomach or Duodenum

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